

# Draft Environmental Impact Report

for the

## Bay Area 1991 Clean Air Plan

### **VOLUME 2: Appendices to the Draft EIR**



**Bay Area Air Quality Management District**

July 1991

**DRAFT ENVIRONMENTAL IMPACT REPORT**

**for the**

**BAY AREA 1991 CLEAN AIR PLAN**

**VOLUME 2: APPENDICES TO THE DRAFT EIR**

**BAY AREA AIR QUALITY MANAGEMENT DISTRICT  
939 Ellis Street  
San Francisco, California 94109**

**July 1991**

## TABLE OF CONTENTS

### APPENDIX

	<u>Page</u>
A. Notice of Preparation (NOP) and Responses	A-1
B. California Clean Air Act (AB 2595)	B-1
C. Toxic Air Contaminant Identification List	C-1
D. Stationary Source Emission Reductions	D-1
E. Fundamental Concepts of Environmental Noise	E-1

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**APPENDIX A:**  
**NOTICE OF PREPARATION (NOP) AND**  
**RESPONSES TO THE NOP**

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# Y AREA AIR QUALITY MANAGEMENT DISTRICT

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## NOTICE OF PREPARATION

TO: Interested Parties

FROM: Bay Area Air Quality  
 Management District  
 939 Ellis Street  
 San Francisco, CA 94109

SUBJECT: Notice of Preparation of a Draft Environmental Impact Report

The Bay Area Air Quality Management District will be the Lead Agency and will prepare an Environmental Impact Report for the project identified below. We need to know the views of your organization as to the scope and content of the environmental information which affects your organization or is germane to your organization's statutory responsibilities in connection with the proposed project.

The project description, location, and the probable environmental effects are contained in the attached materials. A copy of the Initial Study is attached.

Due to the time limits mandated by State law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please send your response to Henry D. Hilken, Planner, at the address shown above. Please include the name of a contact person in your organization.

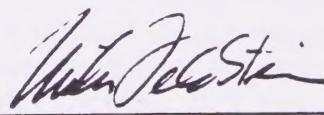
Project Title: 1991 Clean Air Plan

Project Applicant, if any: N/A

Date

11/27/90

Signature



Milton Feldstein

Title

Air Pollution Control Officer

Telephone

(415) 771-6000

Reference: California Administrative Code, Title 14, Sections 15082(a), 15103, 15375.



# BAY AREA AIR QUALITY MANAGEMENT DISTRICT

## INTRODUCTION

The Bay Area Air Quality Management District (BAAQMD), in cooperation with the Metropolitan Transportation Commission (MTC) and the Association of Bay Area Governments (ABAG), is preparing the 1991 Clean Air Plan ('91 CAP). The '91 CAP will outline a regional strategy for attaining and maintaining compliance with State ambient air quality standards for ground level ozone and carbon monoxide. The proposed control measures will be designed to reduce emissions from motor vehicles and from stationary (industrial, commercial and residential) sources of air pollutants.

The BAAQMD includes all of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo and Santa Clara Counties, plus southern Sonoma County and southwestern Solano County. Facilities located within BAAQMD boundaries would be subject to the control measures adopted subsequent to the '91 CAP.

The BAAQMD has determined that the 1991 Clean Air Plan is a "project" as defined by the California Environmental Quality Act (CEQA). The BAAQMD will act as Lead Agency for the proposed '91 CAP and will prepare an environmental impact report (EIR) to analyze the potential environmental impacts that could result from implementation of the '91 CAP.

## BACKGROUND

The California Clean Air Act (CCAA, AB 2595) was signed into law in 1988. Under the CCAA, air districts (such as the BAAQMD) must prepare and submit a plan for attaining and maintaining State ambient air quality standards to the State Air Resources Board (ARB) by June 30, 1991. The required content of the Plan depends on how the region is classified with respect to the severity of its air quality problems. A region's classification is based on the time required to meet State air quality standards. Areas that can demonstrate attainment by the end of 1994 will be classified "moderate". Areas that demonstrate attainment after 1994, but before the end of 1997 will be classified "serious". Areas that cannot demonstrate attainment until after 1997 will be classified "severe". The BAAQMD, MTC, and ABAG expect the Bay Area '91 CAP to be designed to achieve State standards by the end of 1997, and thus anticipate that the Bay Area will be classified a serious area. However, the technical analysis supporting the '91 CAP has not been completed. If the technical analysis indicates a post-1997 attainment date, the Bay Area will be classified severe.

The CCAA requires that serious areas adopt additional controls on existing stationary sources of air pollutants and a permitting program that will result in no net increase in emissions from new and modified stationary sources. Serious areas also

must adopt reasonably available transportation control measures (TCMs) as necessary to attain air quality standards. At a minimum, the TCMs must substantially reduce the rate of increase in vehicle trips and vehicle miles traveled. Serious areas also must adopt provisions for area source and indirect source controls. (Indirect sources are land uses such as office buildings and shopping centers that generate auto trips. Area sources are sources such as consumer products and lawnmowers whose emissions are individually minor but cumulatively significant.) All nonattainment areas, regardless of their classification, must implement public education programs designed to reduce emissions from transportation and area sources.

If the Bay Area is classified a severe area, the '91 CAP must also include: 1) TCMs that result in no net increase in vehicle emissions after 1997 and that achieve an average vehicle ridership during commute hours of 1.5 persons per vehicle by 1999, and 2) measures to achieve the use of a significant number of low emission vehicles by operators of motor vehicle fleets.

The ARB has designated the Bay Area as a nonattainment area for State ozone and carbon monoxide standards. Carbon monoxide (CO) is emitted directly from motor vehicles and industrial facilities. About 85% of the CO in the Bay Area is emitted by motor vehicles. Ground level ozone ( $O_3$ ) is not emitted directly, but is formed in the atmosphere. The primary pollutants that contribute to the formation of ozone are hydrocarbons (HC), or reactive organic gases (ROG), and nitrogen oxides ( $NO_x$ ). Motor vehicles emit about one-half of the ozone precursors in the Bay Area.

The '91 CAP must include measures to reduce emissions of ozone precursors and carbon monoxide in order to attain State air quality standards by the earliest practicable date. The '91 CAP also must assure that compliance with State air quality standards can be maintained in the future, accounting for future growth in the region. Furthermore, the CCAA requires an annual 5% reduction in district-wide emissions of ozone precursors and carbon monoxide, averaged over three year increments, beginning in 1988. The CCAA allows districts to prepare alternate attainment strategies in lieu of the 5% annual reduction, provided the alternate strategies are equally or more effective in improving air quality.

As required under separate but related legislation (AB 3971, Cortese, 1988), the BAAQMD and MTC are currently preparing a TCM Plan for the Bay Area. The TCM Plan being prepared pursuant to AB 3971 will become the TCM portion of the '91 CAP.

The U.S. Congress recently approved comprehensive amendments to the federal Clean Air Act. One of the many provisions of the federal Act is the requirement that areas that have not attained federal air quality standards must prepare plans to demonstrate attainment and maintenance of federal standards. The Bay Area is considered a nonattainment area with respect to federal ozone and carbon monoxide standards. Because the California ambient air quality standards are more stringent than the federal standards, the BAAQMD expects that a Plan developed to satisfy State requirements would satisfy most, if not all, federal requirements.

## PROJECT DESCRIPTION

The '91 CAP will outline the Bay Area strategy for attaining State ambient air quality standards. The '91 CAP will include control measures aimed at reducing air pollutant emissions from many different sources. In general, the proposed control measures can be categorized into measures aimed at reducing emissions from stationary sources and measures aimed at mobile sources. The proposed stationary source control measures will reduce emissions from source categories such as: surface coatings (paints and varnishes), solvent use, petroleum and organic liquids storage and distribution, refinery and chemical plant processes, combustion of fuels, and other industrial and commercial activities. The regional mobile source control strategy includes a set of transportation control measures aimed at reducing motor vehicle trips and vehicle miles traveled. Other mobile source controls would reduce emissions through measures such as vehicle design, retrofit controls, maintenance, and fuel composition.

### STATIONARY SOURCES

With respect to stationary sources, the following types of control measures are being evaluated.

#### Surface Coating and Solvent Use

- Adopt more stringent limits on organic content of coatings (paints and varnishes), solvents (surface preparation and clean-up) and adhesives
- Adopt transfer efficiency requirements for surface coating equipment
- Adopt more stringent emissions limits for certain manufacturing processes
- Reduce or eliminate exemptions in existing rules
- Require improved operations and maintenance procedures

#### Petroleum and Organic Liquids Storage and Distribution

- Require vapor recovery for various uncontrolled fuel transfer operations
- Adopt more stringent controls on organic liquids storage tanks
- Require enhanced controls on storage tanks at gasoline dispensing facilities
- Adopt more stringent controls on non-gasoline bulk terminals and plants

#### Refinery and Chemical Plant Processes

- Require greater control of fugitive emissions (leaks from valves, flanges, pumps, etc.)
- Require enclosure of wastewater treatment systems
- Require pollution control devices on pressure relief valves

### Combustion of Fuels

Require NO<sub>x</sub> controls on gas turbines, utility boilers, non-utility internal combustion engines, boilers, steam generators, process heaters, and other combustion sources

### Other Industrial and Commercial Processes

Require control equipment or emissions limits at various manufacturing processes such as coating and ink manufacturing, resin manufacturing, rubber product manufacturing, asphaltic concrete manufacturing, and natural gas and crude oil production facilities

### Residential Activities and Consumer Products

Adopt a program for citizen postponement of discretionary activities (eg, use of paints and varnishes or internal combustion engine powered lawn equipment) on days forecasted to violate ozone standards

Encourage local collection and proper disposal of household wastes containing volatile organic compounds

## MOBILE SOURCES

With respect to mobile sources, the following control measures are being evaluated:

### Reasonably Available Transportation Control Measures

Employer-based trip reduction programs

Management of parking pricing and supply

Indirect Source Controls, including:

    Trip reduction rules for sources other than employee-related  
    Design review

Air quality elements in local general plans

Integrated transit/land use plans at transit stations

Mobility improvements (already partially or fully funded), including:

    Rail extensions

    Regional high occupancy vehicle (HOV) lanes system

    Transit coordination

    Freeway incident management - phase 1

Other Transportation Control Measures (requiring new legislative authority and funding)

Mobility Improvements (not yet funded), including:

- Region-wide bus service improvements
- Improved access to rail systems
- Facilitation of regional rail agreement
- Expansion of regional rail agreement
- Ferry service
- Carpool/bus lanes
- Bicycle and pedestrian access improvements
- Youth transportation

Traffic operations management, including:

- Freeway incident management - phase 2
- "Smart" streets, signal timing

User incentives, including:

- Transit fare reductions
- Carpool and vanpool incentives
- Vanpool liability insurance

Pricing strategies, including:

- Congestion pricing
- Smog fees
- Gas tax increase
- Toll roads

Other Mobile Source Control Measures

Smoking vehicle reporting program

Requirement for clean fuels for vehicle fleets

Requirement for electrification of urban bus systems

High polluting vehicle retirement program

Requirement for less polluting reformulated gasolines



# BAY AREA AIR QUALITY MANAGEMENT DISTRICT

## INITIAL STUDY

### I. Background

1. Project Title: 1991 Clean Air Plan
2. Permit Application Number: N/A
3. Name, address, contact and phone number of proponent:  
Bay Area Air Quality Management District  
939 Ellis Street  
San Francisco, CA 94109  
(415) 771-6000
4. Project Location: N/A
5. Lead Agency Contact: Henry D. Hilken, Planner

### II. Environmental Impacts

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>
1. Earth. Will the proposal result in:			
a. Unstable earth conditions or changes in geologic substructures?			<input checked="" type="checkbox"/>
b. Disruptions, displacements, compaction or over covering of the soil?		<input checked="" type="checkbox"/>	
c. Change in topography or ground surface relief features?		<input checked="" type="checkbox"/>	
d. The destruction, covering or modification of unique geologic or physical features?			<input checked="" type="checkbox"/>
e. Any increase in wind or water erosion of soils, either on or off the site?		<input checked="" type="checkbox"/>	
f. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?			<input checked="" type="checkbox"/>
g. Exposure of people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards?		<input checked="" type="checkbox"/>	

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>
<b>2. Air.</b> Will the proposal result in:			
a. Substantial criteria air pollutant emissions or deterioration of ambient air quality?	<u>  </u>	<u>X</u>	<u>  </u>
b. Emissions of toxic air contaminants?	<u>  </u>	<u>X</u>	<u>  </u>
c. The creation of objectionable odors or dust?	<u>  </u>	<u>X</u>	<u>  </u>
d. Alteration of air movement, moisture, or temperature, or any change in climate, either locally or regionally?	<u>  </u>	<u>  </u>	<u>X</u>
<b>3. Water.</b> Will the proposal result in:			
a. Changes in currents, or the course or direction of water movements, in either marine or fresh waters?	<u>  </u>	<u>  </u>	<u>X</u>
b. Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff?	<u>  </u>	<u>X</u>	<u>  </u>
c. Alterations to the course or flow of flood waters?	<u>  </u>	<u>  </u>	<u>X</u>
d. Change in the amount of surface water in any water body?	<u>  </u>	<u>  </u>	<u>X</u>
e. Discharge into surface waters, or any alteration of surface water quality, including but not limited to temperature, dissolved oxygen or turbidity?	<u>  </u>	<u>X</u>	<u>  </u>
f. Alteration of the direction or rate of flow of ground waters?	<u>  </u>	<u>  </u>	<u>X</u>
g. Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?	<u>  </u>	<u>  </u>	<u>X</u>
h. Substantial reduction in the amount of water otherwise available for public water supplies?	<u>  </u>	<u>X</u>	<u>  </u>
i. Exposure of people or property to water related hazards such as flooding or tidal waves?	<u>  </u>	<u>  </u>	<u>X</u>
<b>4. Plant Life.</b> Will the proposal result in:			
a. Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, and aquatic plants)?	<u>  </u>	<u>X</u>	<u>  </u>
b. Reduction of the numbers of any unique, rare or endangered species of plants?	<u>  </u>	<u>X</u>	<u>  </u>

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>
c. Introduction of new species of plants into an area, or a barrier to the normal replenishment of existing species?	_____	_____	X
d. Reduction in acreage of any agricultural crop?	_____	_____	X
<b>5. Animal Life.</b> Will the proposal result in:			
a. Change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms or insects)?	_____	X	_____
b. Reduction of the number of any unique, rare or endangered species of animals?	_____	X	_____
c. Introduction of new species of animals into an area, or a barrier to the migration or movement of animals?	_____	_____	X
d. Deterioration to existing fish or wildlife habitat?	_____	X	_____
<b>6. Noise.</b> Will the proposal result in:			
a. Increases in existing noise levels?	_____	X	_____
b. Exposure of people to severe noise levels?	_____	_____	X
<b>7. Light and Glare.</b> Will the proposal produce new light or glare?	_____	_____	X
<b>8. Land Use.</b> Will the proposal result in a substantial alteration of the present or planned land use of an area?	_____	X	_____
<b>9. Natural Resources.</b> Will the proposal result in:			
a. Increase in the rate of use of any natural resources?	_____	X	_____
b. Substantial depletion of any nonrenewable natural resource?	_____	X	_____
<b>10. Risk of Upset.</b> Will the proposal involve:			
a. A risk of an explosion or the release of hazardous substances (including, but not limited to, oil, pesticides, chemicals or radiation) in the event of an accident or upset conditions?	_____	X	_____
b. Possible interference with an emergency response plan or an emergency evacuation plan?	_____	_____	X

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>
11. <b>Population.</b> Will the proposal alter the location, distribution, density, or growth rate of the human population of an area?	_____	X	_____
12. <b>Housing.</b> Will the proposal affect existing housing, or create a demand for additional housing?	_____	_____	X
13. <b>Transportation/Circulation.</b> Will the proposal result in:			
a. Generation of substantial additional vehicular movement?	_____	_____	X
b. Effects on existing parking facilities, or demand for new parking?	_____	X	_____
c. Substantial impact upon existing transportation systems?	X	_____	_____
d. Alterations to present patterns of circulation or movement of people and/or goods?	X	_____	_____
e. Alterations to waterborne, rail or air traffic?	X	_____	_____
f. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?	_____	X	_____
14. <b>Public Services.</b> Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:			
a. Fire protection?	_____	X	_____
b. Police protection?	_____	X	_____
c. Schools?	_____	_____	X
d. Parks or other recreational facilities?	_____	_____	X
e. Maintenance of public facilities, including roads?	_____	X	_____
f. Other governmental services?	_____	X	_____
15. <b>Energy.</b> Will the proposal result in:			
a. Use of substantial amounts of fuel or energy?	_____	X	_____
b. Substantial increase in demand upon existing sources of energy, or require the development of new sources of energy?	_____	X	_____

16. **Utilities.** Will the proposal result in a need for new systems, or substantial alterations to the following utilities:

- a. Power or natural gas? \_\_\_\_\_ X \_\_\_\_\_
- b. Communications systems? \_\_\_\_\_ \_\_\_\_\_ X \_\_\_\_\_
- c. Water? \_\_\_\_\_ X \_\_\_\_\_
- d. Sewer or septic tanks? \_\_\_\_\_ X \_\_\_\_\_
- e. Storm water drainage? \_\_\_\_\_ X \_\_\_\_\_
- f. Solid waste disposal? \_\_\_\_\_ X \_\_\_\_\_

17. **Human Health.** Will the proposal result in:

- a. Creation of any health hazard or potential health hazard (excluding mental health)? \_\_\_\_\_ X \_\_\_\_\_
- b. Exposure of people to potential health hazards? \_\_\_\_\_ X \_\_\_\_\_

18. **Aesthetics.** Will the proposal result in the obstruction of any scenic vista or view open to the public, or will the proposal result in the creation of an aesthetically offensive site open to public view?

19. **Recreation.** Will the proposal result in an impact upon the quality or quantity of existing recreational opportunities?

20. **Cultural Resources.**

- a. Will the proposal result in the alteration of or the destruction of a prehistoric or historic archaeological site? \_\_\_\_\_ \_\_\_\_\_ X \_\_\_\_\_
- b. Will the proposal result in adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object? \_\_\_\_\_ \_\_\_\_\_ X \_\_\_\_\_
- c. Does the proposal have the potential to cause a physical change which would affect unique ethnic cultural values? \_\_\_\_\_ \_\_\_\_\_ X \_\_\_\_\_
- d. Will the proposal restrict existing religious or sacred uses within the potential impact area? \_\_\_\_\_ \_\_\_\_\_ X \_\_\_\_\_

**21. Mandatory Findings of Significance.**

- a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?  
\_\_\_\_ X \_\_\_\_
- b. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future.)  
\_\_\_\_ \_\_\_\_ X \_\_\_\_
- c. Does the project have impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant.)  
\_\_\_\_ X \_\_\_\_
- d. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?  
\_\_\_\_ X \_\_\_\_

### III. Discussion of Environmental Impact Evaluation

**1. Earth; b, c, e, g** - New transit, HOV, bicycle and other transportation facilities could lead to displacements or overcovering of soils, changes in surface relief features, or increased erosion. Such facilities also could be subject to geologic hazards such as earthquake or landslide.

Some control measures, such as Indirect Source Control, could lead to changes in land use patterns and intensity. For example, new development could be redirected from outlying areas to currently undeveloped "infill" parcels in predominantly developed areas. Such redirected urban development is expected to result in a net environmental benefit to the region by reducing sprawl, however local impacts could occur. Redirected urban development could cause displacements or overcovering of soils, changes in relief features, or increased erosion at the local level. Similarly, such development could be subject to geologic hazards.

**2. Air; a, b, c** - The '91 CAP is intended to reduce air pollutant emissions and improve ambient air quality. However, certain types of abatement equipment proposed in the Plan could result in emissions of criteria air pollutants. For example, afterburners installed to incinerate emissions of reactive organic gases involve combustion and would therefore emit NO<sub>x</sub>, CO, and particulate matter.

Certain control measures could result in emissions of toxic air contaminants. For example, the use of substitute, low-VOC coatings (paints and varnishes), solvents, and adhesives could result in increased air toxics emissions.

Certain control measures, such as the use of substitute coatings, solvents, and adhesives, could result in odorous emissions.

**3. Water; b, e, h** - Certain types of abatement equipment, eg, wet scrubbers for NO<sub>x</sub> control, could increase water consumption. Certain control measures also could affect water quality. For example, wastewater from wet scrubbers could become contaminated and, if discharged into sewers or waterways, could affect water quality.

New transportation facilities or redirected urban development could affect local drainage patterns and surface runoff.

**4. Plant Life; a, b** - New transportation facilities and land use changes could affect plant life on the local level including, possibly, rare or endangered species.

**5. Animal Life; a, b, d** - New transportation facilities and land use changes could affect local animal habitats including, possibly, those of rare or endangered species.

**6. Noise; a** - Certain types of control equipment could increase noise levels at industrial facilities. Increased bus and train service could increase noise levels in areas adjacent to guideways/routes.

**8. Land Use** - Certain control measures could alter land uses. One of the goals of the transportation control measures is to improve the coordination between land use developments and transit systems. For example, the Indirect Source Control program will likely include incentives to provide a mix of land uses in new developments and increase commercial and residential densities near transit corridors.

**9. Natural Resources; a, b** - Certain stationary source controls could increase the consumption of energy produced from non-renewable fossil fuels. This effect could be offset partially or completely by implementation of measures to reduce auto use and measures to increase energy efficiency. Use of substitute coatings, solvents, and adhesives could increase consumption of feedstocks required for their production.

**10. Risk of Upset; a** - Certain control measures use hazardous materials as part of the control process. For example, selective catalytic reduction involves the injection of anhydrous ammonia into the flue gas stream to control NO<sub>x</sub> emissions. Ammonia is a hazardous material and presents a risk of upset during transport, storage and use.

Other control measures, such as carbon adsorption to control ROG emissions, capture and concentrate potentially hazardous compounds. Generation of increased quantities of such materials could increase the risk of upset during transport, treatment or disposal.

**11. Population** - The '91 CAP is not expected to affect the overall growth rate in the region, although some control measures could affect the distribution of population within the region. For example, the Indirect Source Control program will probably include incentives to increase residential densities near transit facilities.

**13. Transportation; b, c, d, e, f** - The '91 CAP's transportation control measures will reduce vehicle trips and vehicle miles traveled, however some secondary impacts on transportation systems could result from proposed control measures. Examples of TCM activities that could impact transportation facilities include: alterations to parking facilities to provide for fee collection and/or rideshare incentives; construction of HOV facilities; construction/expansion of rail, bus, ferry and bicycle facilities, and; increased demand for transit services. Measures that encourage walking and bicycle use could increase traffic hazards for pedestrians and bicyclists.

**14. Public Services; a, b, e, f** - Control measures that use or generate hazardous materials could increase the risk of an accidental release. This could result in greater demands on local police, fire, and public health agency resources.

The BAAQMD expects to delegate implementation of some TCMs and Indirect Source Controls to local governments, provided local programs meet delegation criteria. Additional resources may be required by local governments in order to implement and enforce these measures.

**15. Energy; a, b** - See discussion under 9, Natural Resources.

**16. Utilities; a, c, d, e, f** - Control measures that increase consumption of energy or water could possibly necessitate alterations to those utilities. Control measures that generate wastewater or solid waste could impact those utilities. New transportation facilities or redirected urban development could require modifications to stormwater drainage facilities.

**17. Human Health; a, b** - Control measures such as use of substitute coatings, solvents, and adhesives could increase health risks depending on the toxic properties of the replacements. The use of ammonia in selective catalytic reduction to control NO<sub>x</sub> could affect human health if an accidental release occurred.

**21. Mandatory Findings of Significance; a, c, d** - The '91 CAP is intended to benefit the environment by reducing air pollutant emissions. However, the Plan has the potential to degrade the quality of environment due to possible secondary impacts such as: covering soils, changing relief features or increasing erosion; increasing water consumption; altering wastewater discharges; affecting plant communities and wildlife habitats; consuming natural resources, and; creating a risk of upset.

Many of the potential impacts discussed in this Initial Study could be individually limited but cumulatively significant.

The '91 CAP is intended to benefit human health and safety by reducing air pollutant emissions. The Plan could indirectly result in adverse affects on human beings by exposing people to geologic hazards, changing emissions of toxic air contaminants, increasing noise levels, creating a risk of upset, and increasing hazards for pedestrians and bicyclists.

#### IV. Determination

On the basis of this initial evaluation:

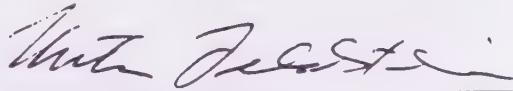
I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared. [ ]

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the project. A NEGATIVE DECLARATION will be prepared. [ ]

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required. [ X ]

1/27/90

Date



Milton Feldstein  
Air Pollution Control Officer



UNITED STATES POSTAL SERVICE  
Western Regional Office  
San Bruno, CA 94099-0001

December 24, 1990

Henry D. Hilken, Planner  
Bay Area AQMD  
939 Ellis St.  
San Francisco, CA 94109

Dear Mr. Hilken:

This letter serves as the response to the Notice of Preparation of a Draft Environmental Impact Report for the 1991 Clean Air Plan project. I have highlighted those probable Environmental Impacts (as identified in The Bay Area Air Quality Management District's Initial Study) which present potential impacts to the United States Postal Service operations in the nine county BAAQMD.

LAND USE

- Will the proposal result in a substantial alteration of the present or planned land use of an area? Initial Study (I.S.) classified as maybe.

POPULATION

- Will the proposal alternate location, distribution, density or growth rate of the human population of an area? I.S. classified as maybe.

TRANSPORTATION/CIRCULATION

- Effects on existing parking facilities or demand for new parking? I.S. classified as maybe.
- Alterations to present pattern of circulation or movement of people and/or goods? I.S. classified as yes.
- Increase in traffic hazards to motor vehicles, bicyclists or pedestrians? I.S. classified as yes.

Henry D. Hilken  
December 24, 1990  
Page 2

PUBLIC SERVICES

- Maintenance of public facilities including roads? I.S. classified as maybe.
- Altered governmental services? I.S. classified as maybe.

Some of the listed impacts are easy to discern, but I wish to present a brief overview of USPS activities. Roughly 30,000 Postal employees work and commute in the Bay Area. A national collective bargaining agreement covering the wages, hours and working conditions of roughly 600,000 employees applies to the vast majority of Bay Area USPS employees.

The Postal Service operates the second largest vehicle fleet in the country next to the Department of Defense. USPS vehicles are on the street and highways everyday. We operate comprehensive vehicle maintenance facilities while storing and dispensing various fuels.

Land use/development strategies present challenges thru their impacts on the location and accessibility of Post Offices and major facilities similar to truck terminal operations. Obviously, shifts in housing locations will impact our real estate/development activities and our related long and short range plans.

The Postal Service is a highly regulated Federal entity with statutory obligations detailing performance expectations related to mail delivery. The potential conflict in missions is significant with regards to our delivery of an essential public service.

Henry D. Hilken  
December 24, 1990  
Page 3

I look forward to your continuing informational requests and procedural updates related to the Environmental Impact Report for the 1991 Clean Air Plan. Please call me as needed at 415/742-4719.

*Philip E. Richardson*  
for Scott R. Ross, MPH, CIH  
Regional Environmental Coordinator

cc: Regional Directors  
Western Region  
D. Matson  
M. Gordon  
S. Stielstra

## DEPARTMENT OF TRANSPORTATION

BOX 7310  
SAN FRANCISCO, CA 94120  
(415) 923-4444

January 9, 1991

SCH# 90030986  
FILE NO: D40010

Henry D. Hilken  
Bay Area Air Quality  
Management District  
939 Ellis Street  
San Francisco, CA 94109

**RE: BAY AREA QUALITY MANAGEMENT DISTRICT'S NOP FOR 1991  
CLEAN AIR PLAN**

Dear Mr. Hilken:

Thank you for including the California Department of Transportation (Caltrans) early in the environmental impact review process for this project. We have reviewed the project description and the initial study and forward the following comments.

The proposed project has potential for significant traffic impacts on nearly all State Routes and Interstate Highways in District 4.

A study should be done to assess traffic impacts including, but not limited to:

- A) ADT, AM, PM peak hour trip rates for State Routes, and for all significantly affected streets, highways, freeway ramps, and controlling intersections in the Bay Area. Scenarios should include both project and no project cases for existing and future travel.
- B) Analyze future conditions with existing traffic, and with cumulative traffic generated by all planned and approved developments in the area. Coverage should include all traffic that would affect the highway facilities evaluated, and should not be limited to projects under the jurisdiction of the lead agency, for example, development in neighboring counties.

January 9, 1991

File No: D40010

Page 2

- C) All mitigations being proposed should be fully discussed in the environmental document. Those discussions should include, but not be limited to, the following areas:
  - financing,
  - scheduling considerations,
  - implementation responsibilities and phasing plans,
  - monitoring responsibilities, strategies, and reporting.
- D) The DEIR should indicate what the consequences will be if the monitoring program indicates that the desired conditions are not achieved.
- E) Public transportation accounts for a small percentage of the daily trips in the Bay Area. Changing the land use designation for sites near public transportation will perhaps increase this percentage at those locations, but may force reduced transit use at other locations due to rider displacement. The DEIR should address the limits of public transportation's ability to absorb additional trips as well as the following impacts on the public transit systems:
  - 1) Numbers and types of vehicles available
  - 2) Levels of Service (LOS)
  - 3) Routes, stop locations, and improvements
  - 4) Frequency and duration of schedules
  - 5) Capital and operational costs
    - degree of subsidy/fare box ratios
    - estimate of subsidies due to increases in ridership

(Intermodal/multimodal facilities and services - coordination of routes and schedules)

We would like to know the methodology for projecting the reductions (and locations) of VMT as well as the techniques for demonstrating the effectiveness of the air quality improvement.

Highway facilities are constructed to accommodate (not encourage) the travel required by existing land use patterns. We, therefore, will need to know what existing land use and development patterns will be changed in such a way to reduce the need/demand/congestion already evident on state highways.

January 9, 1991  
File No: D40010  
Page 3

Any inclusion of an air quality element in general plans will be required to be consistent with all other elements of those plans. The clean Air Plan DEIR should explore any impacts to local land use planning.

The use of ramp meters should be explored in the DEIR.

The Clean Air Plan should address any relationship to the State mandated Congestion Management Plan.

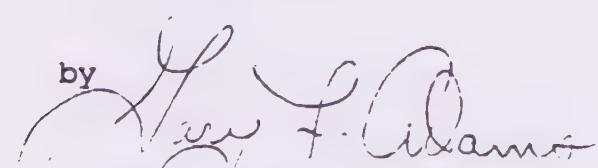
The DEIR should explore the Air Quality impacts from the movement of goods and services. This might include rail, truck and shipping vehicles and facilities.

We look forward to reviewing the DEIR. We expect to receive a copy of the administrative Draft EIR. To expedite the review process, you may send two copies in advance to the undersigned contact person for this agency at the following address:

Gary F. Adams  
District CEQA Coordinator  
Caltrans District 4  
P.O. Box 7310  
San Francisco, CA 94120

Sincerely yours,

PRESTON W. KELLEY  
District Director

by  
  
GARY F. ADAMS  
District CEQA Coordinator

GA:tp

cc: Loreen McMahon, State Clearinghouse  
Sally Germain, ABAG  
Susan Pultz, MTC

# UNIVERSITY OF CALIFORNIA, BERKELEY

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SANTA BARBARA • SANTA CRUZ

PROPERTY DEVELOPMENT  
Transportation Services

2020 MILVIA STREET, SUITE 401  
BERKELEY, CALIFORNIA 94720  
TELEPHONE: (415) 643-5297  
FAX: 642-6513

December 28, 1990

Mr. Henry D. Hilkin  
Planner  
BAAQMD  
939 Ellis Street  
San Francisco, CA 94109

Dear Mr. Hilkin,

I am writing in response to the Notice of Preparation of the EIR for the 1991 Clean Air Plan. I have five major areas of concern.

## 1. Recognize Traffic Mitigation Measures Already Implemented

Standards set for colleges/universities should recognize already implemented mitigation measures. The University of California at Berkeley in the last 18 months has implemented alternative transportation programs and 1100 staff and 1600 students are participating. A reduced-fare BART ticket for students will be available Fall 1991 thus reducing student vehicle use even more. Standards which fail to recognize the efforts already underway by a college/university will be unfair. It will be more difficult to get the next 1000 staff into alternative modes than it was to get the first 1000 staff to change.

## 2. Legal Obligations in Managing Parking Pricing and Supply

The University of California parking systems must be self-supporting (mandate of the State legislature) and must maintain an adequate revenue base to meet bond indebtedness requirements. Failure to maintain adequate revenues will result in default of the bonds and disaster for the University's bond rating. Any pricing or supply system developed has to maintain the employer's ability to meet legal bond requirements and to meet the operating costs of the system.

### 3. Responsibility for Non-work Related Trips

It is frequently stated that 22% of all vehicle trips are work related and that 78% of all trips are non-work related. Given this fact, no more than 22% of proposed emission reduction should be assigned to employers. BAAQMD and MTC should consider strong measures to address the 78% of trips that cannot be influenced by employers. Such measures could include trip reduction ordinances set by cities to reduce non-work related trips.

### 4. Improved Regional Transit Systems

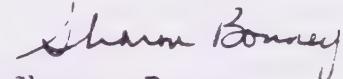
BAAQMD should consider directing funds toward improved transit systems region-wide or employers will have little to offer employees when alternate transportation is mandated. Staff who do not live conveniently near a BART station have few alternatives to driving alone.

### 5. Additional Funding for Mandated Programs

Colleges and universities have limited resources to spend on alternative transportation programs and mitigation measures. If college campuses are to implement meaningful programs, additional funds will have to be provided. These funds could come from increased bridge tolls, higher vehicle registration monies, toll roads, and other strategies put forward in MTC's TCM recommendations.

Thank you for the opportunity to comment.

Sincerely,



Sharon Bonney  
Acting Director  
Transportation Services



# Central Contra Costa Sanitary District

5019 Imhoff Place

Martinez, California 94553-4392

(415) 689-3890

FAX: (415) 676-7211

ROGER J. DOLAN  
General Manager  
Chief Engineer

KENTON L. ALM  
Counsel for the District  
(415) 938-1430

JOYCE E. MURPHY  
Secretary of the District

January 2, 1991

Mr. Henry Hilken  
Planner  
Bay Area Air Quality  
Management District  
939 Ellis Street  
San Francisco, CA 94109

Dear Mr. Hilken:

## RESPONSE TO THE NOP FOR THE 1991 CLEAN AIR PLAN EIR

Thank you for the opportunity to comment on the 1991 Clean Air Plan EIR Notice of Preparation. CCCSD requests that the following issues be addressed in the EIR:

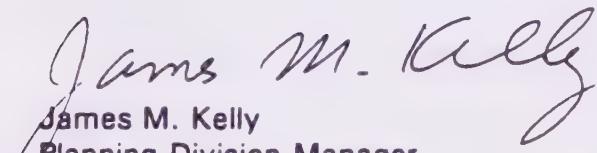
1. The project description should define the quantity of pollutant elimination necessary by subbasin "to attain and maintain compliance with State ambient air quality standards for ground level ozone and carbon monoxide." (Introduction, page 1)
2. The project description should identify the sources of the following NOP statements:
  - o "About 85% of the CO in the Bay Area is emitted by motor vehicles." (Background, page 2)
  - o "Motor vehicles emit about one-half of the ozone precursors in the Bay Area." (Background, page 2)
3. The project description should quantify the percentage contributions of hydrocarbons, reactive organic gases, and nitrogen oxides to ozone formation.
4. The proposed control measures should be defined in sufficient detail to assess the environmental, economic, and operational impacts on specific, potentially affected sources. (Project Description, pages 3 to 5)

Mr. Henry Hilken  
January 2, 1991  
Page 2

5. The proposed pollution control measures should be graduated to place greater control on sources that contribute most to non-attainment; the proposed controls should recognize that control of one ozone precursor could produce another for a particular control technology and that a balancing of measures may be necessary. (Project Description, Stationary Sources, page 4)
6. Will control measures for construction vehicles be proposed and evaluated? (Project Description, Mobile Sources, pages 4 and 5)
7. Identify the locations, quantities, and characteristics of potential water quality contamination which could result from implementation of new control measures. (Initial Study, Discussion of Environmental Impact Evaluation, 3. Water, page 7)
8. Identify the locations, quantities, and quality of wastewater which could be generated from new control measures; (Initial Study, Discussion of Environmental Impact Evaluation, 16. Utilities, pages 9)

If you have any questions, please contact me or Russell Leavitt at 689-3890.

Sincerely,

  
James M. Kelly  
Planning Division Manager

JMK/RL/ls

January 10, 1991

Henry D. Hilken, Planner  
Bay Area Air Quality  
Management District  
939 Ellis Street  
San Francisco, CA 94109

Dear Mr. Hilken:

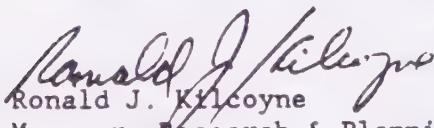
AC Transit staff has reviewed the Notice of Preparation of a DEIR for the 1991 Clean Air Plan. We have the following comments.

The proposals which are a part of this project are consistent with District policies as outlined in our Short Range Transit Plan. AC Transit is trying to address some of the impacts of increased vehicle trips and vehicle miles traveled with the implementation of our Comprehensive Service Plan of transit route changes. By developing an improved grid route network and a timed transfer system, we hope to achieve a 20% increase in transit ridership, which would correspond to a decrease in auto trips. Further increases in peak hour frequencies can produce even more dramatic increases in ridership and corresponding reductions in auto trips.

Although the 1991 Clean Air Plan is consistent with the goals of the District, a major area of concern for most transit agencies is the financial impact which is the result of implementing the recommended Transportation Control Measures, such as bus service improvements, improved access to rail systems, and the electrification of urban bus systems. These projects all require capital and operating funding resources far in excess of what is currently available.

As a mitigation measure, we recommend that permanent funding sources be identified to allow transit operators to implement the TCM measures as defined in the Clean Air Plan. Without an appropriate level of funding, Bay Area transit operators will not be able to effectively contribute to achieving attainment of State ambient air quality standards in the region.

Sincerely,

  
Ronald J. Kilcoyne  
Manager, Research & Planning

RJK:dgk

Ref:CAP

cc: Members, AC Transit Board of Directors  
James L. O'Sullivan, General Manager

Henry D. Hilken  
Page 2

Sharon D. Banks, Interim General Manager  
Betty L. Blubaugh, District Secretary  
Kenneth O. Stanley, Assistant General Manager  
Ronny J. Goldsmith, Chief Financial Officer  
Debra G. King, Senior Transportation Planner  
Laura Allen, Transportation Planner



GOLDEN GATE BRIDGE, HIGHWAY AND TRANSPORTATION DISTRICT

11/28/90  
DATE: 11/28/90  
CAPCO  
LEARN  
CL. DLT  
ANG  
LEON  
PERMIT  
MEET  
PLANNING  
D.L.E  
LECP  
Feldstein

December 28, 1990

Mr. Milton Feldstein  
Air Pollution Control Officer  
Bay Area Air Quality Management District  
939 Ellis Street  
San Francisco, CA 94109

Re: NOTICE OF PREPARATION OF A DRAFT EIR ON THE 1991 CLEAN AIR PLAN

Dear Mr. Feldstein:

The Project Description, provided with the subject Notice of Preparation, contains a list of Reasonably Available Transportation Control Measures. One of the listed control measures is Air quality elements in local general plans. Your staff have indicated that the Bay Area Air Quality Management District is open to consider in this connection, certain measures that would improve the efficiency and effectiveness of transit services. It is suggested that the following measures and their environmental effects, be considered:

General plans to specify the corridors that should receive significant levels of transit service;

Transit agencies to adopt policies that give priority to maintaining desired levels of service in the designated corridors;

Set standards for intersection capacity, turning radii, bus priority measures, etc., and program improvements to ensure the efficiency of transit vehicle operations in traffic, and reduce the impacts of transit vehicles on general traffic within the designated corridors;

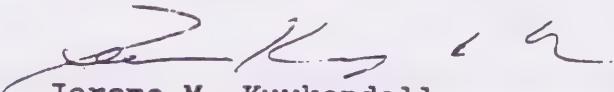
Set standards for transit access facilities such as conveniently located transit stops, bus turn-outs, shelters and attractive pedestrian paths to the transit stops within the designated corridors; and

Mr. Milton Feldstein  
Page 2  
December 28, 1990

Encourage the location of land use activities that need transit service within the designated corridors.

The Golden Gate Bridge, Highway and Transportation District is committed to supporting the development and implementation of the 1991 Clean Air Plan. If you need additional information in this connection, please call me, (415) 257-4465, or Peter Dyson, Senior Planner, (415) 257-4431.

Very truly yours,



Jerome M. Kuykendall  
Director of Planning  
and Policy Analysis

JMK:snm  
c: Carney J. Campion



# ORO LOMA SANITARY DISTRICT

Directors  
Howard W. Kerr President  
M. L. Sanford Vice President  
Harvey V. Neuling Secretary  
Kenneth G. Burnard Director  
Carl E. Franson Director  
General Manager  
Paul H. Causey

2600 GRANT AVENUE  
SAN LORENZO, CALIFORNIA 94580  
TELEPHONE (415) 276-4700  
FAX (415) 276-1528

December 27, 1990

Mr. Henry D. Hilken, Planner  
Bay Area Air Quality Management District  
San Francisco, California 94109

Subject: 1991 Clean Air Plan EIR Comments

Dear Mr. Hilken:

The attached comments are Oro Loma Sanitary District's response to the Notice of Preparation for a Draft Environmental Impact Report on the 1991 Clean Air Plan, received from your office on December 3, 1990.

We appreciate the opportunity to provide input and would like to be informed of any progress on developments regarding the completion of the EIR and Clean Air Plan.

Please do not hesitate to contact me at 276-4700 if you have any questions regarding our comments or need any assistance or input in the future.

Sincerely,

Doug C. Humphrey  
Director of Plant Operations and Maintenance

Enclosure

DCH:SS:bh

SK/EIR.COM/DH

1991 Clean Air Plan- BAAQMD

DRAFT EIR

Oro Loma Sanitary District Comments

No Net Increase in Emissions

There is a statement in the "BACKGROUND" section, page 1, of the Notice of Preparation which states that areas designated as serious must adopt a permitting program that will result in no net increase in emissions from new and modified stationary sources. Although wastewater treatment plants are not major sources of emissions, this seems to be an unrealistic goal. Expansion of facilities due to growth and addition of processes due to changes in water quality regulations will likely occur in future years in the Bay Area. A slight increase in emissions of air pollutants will result as a reaction to meet the more restrictive water quality standards, and the BAAQMD should realize this.

Stationary Sources

In general, any control measures should be required only if a thorough review of BAAQMD's work on the recent AB2588 Air Toxics "Hot Spots" indicates that this is reasonable. Control measures should be required for facilities only if the facility has a significant amount of emissions from the stationary resource to be controlled. We urge the BAAQMD to use this priority basis approach instead of a "blanket" requirement for control measures on processes or operations.

The recent work on the emissions estimation program which was performed in accordance with AB2588 showed that only large wastewater treatment plants have significant emissions of volatile organic compounds, hydrocarbons, or NOx. The Clean Air Plan should focus on these large facilities. Control measures such as enclosure of systems should be applied to specific facilities which may need them, not a "blanket" requirement for all plants. Individual treatment facilities may operate or produce results very differently from each other, and should, therefore, not necessarily have the same control measure requirements.

Combustion of Fuels

The BAAQMD should consider giving emission reduction "credit" to facilities who have existing permits for internal combustion engines and decide to voluntarily implement NOx controls. These control measures are generally much more significant in reducing emissions from wastewater plants than measures on procedures for handling solvents, measures on relief valves, etc.

In summary, the BAAQMD should consider giving credit for voluntary reduction, which could be done in lieu of other less significant measures that may be considered as "mandatory".

Initial Study - Environmental Impacts

Water - 3(e) - The proposal may very possibly alter surface water quality if no set emission increase is required. As a result, it may be difficult for new processes and facilities that would enhance water quality to be placed into operation.

Utilities - 16(d)(f) It appears that the proposal could likely result in a new system or alteration to existing systems for solid waste disposal (household wastes) and sewers.

sk\Draft.eir

DUBLIN  
SAN RAMON  
SERVICES  
DISTRICT



7051 Dublin Boulevard  
Dublin, California 94568  
FAX 415 829 1180  
415 828 0515

December 18, 1990

Mr. Henry D. Hilken, Planner  
Bay Area Air Quality Management District  
939 Ellis Street  
San Francisco, CA 94105

Dear Mr. Hilken:

The Dublin San Ramon Services District (DSRSD) appreciates the opportunity to respond to the Notice of Preparation for the 1991 Clean Air Plan Draft Environmental Impact Report (EIR). Issues of concern to DSRSD relate to the wastewater, water, and recycled water services we provide.

We provide these services under the terms of permits issued by a number of regulatory agencies including the Regional Water Quality Control Board, the Department of Health Services, and the Bay Area Air Quality Management District. We operate a number of devices at our wastewater treatment plant which burn hydrocarbons. These include reciprocating and diesel engines, boilers and flares. As a result the environmental impacts to wastewater treatment facilities of alternative devices or changed emission control equipment should be evaluated.

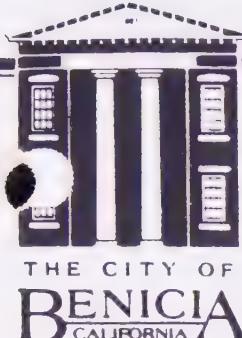
We also rely upon a fleet of vehicles to operate and maintain our wastewater collection system and water distribution system. It is not possible to curtail their use while still maintaining the system so as to protect public health. This environmental impacts of curtailed vehicle use on water and wastewater service should be evaluated.

We would be glad to meet with you or your consultants to discuss our concerns if you determine such a meeting is needed. As requested in the Notice of Preparation, the DSRSD contact person will be Bert Michalczyk, Technical Services Manager.

Sincerely,

BERT L. MICHALCZYK  
Technical Services Manager

BLM:sjc



CITY HALL • 250 EAST L STREET • BENICIA, CA 94510 • (707) 746-4200

December 27, 1990

Henry D. Hilken, Planner  
Bay Area Air Quality Management District  
939 Ellis Street  
San Francisco, CA 94109

Dear Mr. Hilken:

We have reviewed the Notice of Preparation of a Draft Environmental Impact Report (NOP) for the 1991 Clean Air Plan. Generally we concur with the findings of your Initial Study of Environmental Impacts and we believe that all of the issue areas identified should be analyzed in the EIR.

An issue of particular importance to the City of Benicia is the potential effect of indirect source controls on new development, including development consistent with adopted general plans. Effects on all types of development, including industrial, commercial and residential, should be considered in terms of whether the controls will inhibit or prevent development or create the need for general plan changes in the planned location or intensity of the various types of development. The potential effect on the ability of the region to meet projected housing needs, especially the need for affordable housing, should be analyzed.

In relation to public services, we note that infill development at increased densities could impact schools, libraries and parks. We also recommend that the EIR consider projected availability and supply of alternative energy sources in relation to the anticipated increase in demand which will result from implementation of the Clean Air Plan.

Thank you for the opportunity to comment on the NOP for this project. Please contact me should you have questions or need further information regarding our comments.

Sincerely,

Katherine Hammer  
Senior Planner

MARILYN CITRON O'ROURKE, Mayor

Members of the City Council

DIRK FULTON Mayor Pro Tem • JOHN F. SILVA • ERNEST R. CIARROCCHI • RICHARD W. SHAFER

MICHAEL WARREN, City Manager

PHYLLIS GARRIGUES, City Treasurer

FRANCES GRECO, City Clerk

**Pacific Gas and Electric Company**

P.O. Box 7640  
San Francisco, CA 94120  
415/972-6901  
Telecopy 415/972-9201

John F. McKenzie  
Director  
Environmental Planning

December 27, 1990

**PG&E**  
Mr. Milton Feldstein  
Bay Area Air Quality  
Management District  
939 Ellis Street  
San Francisco, CA 94109

Dear Mr. Feldstein:

Re: Comments on Preparation of Draft Environmental  
Impact Report for 1991 Clean Air Plan

In response to your request for comments on the Bay Area Air Quality Management District's intent to prepare Draft Environmental Impact Report on the proposed 1991 Clean Air Plan, we would like to make the following suggestions. Pacific Gas and Electric (PG&E) encourages the District to include mobile source control measures in its 1991 Clean Air Plan (CAP) strategy. We would also like to offer whatever assistance we can to the District in developing an approach for clean fuel requirements.

Please keep us informed of further developments with the 1991 CAP. As you are aware PG&E has undertaken an aggressive compressed natural gas vehicle program. We are available to provide the District staff or members of the District's Board of Directors with information on PG&E's program or information on alternate fuels, and would be happy to arrange a natural gas vehicle demonstration. Please contact me if you have any questions relative to these matters.

Sincerely,

*JF McKenzie*

JK

JK

HH HHH

maintain on mailing list

Tom 12/19

12/19/90



December 14, 1990

R. I. E.  
TECH

Milton Feldstein  
Air Pollution Control Officer  
Bay Area Air Quality Management District  
939 Ellis Street  
San Francisco, CA 94109

Re: NOP for the 1991 Clean Air Plan

Dear Mr. Feldstein:

Thankyou for the opportunity to comment on the NOP. We have no comments at this time; however, we would be interested in commenting on the 1991 Clean Air Plan and Draft EIR when they are prepared. Please address any correspondence to:

John Knight  
City of Brentwood Planning Department  
708 Third Street  
Brentwood CA, 94109

Sincerely,

John Knight  
Associate Planner

/jk/letters/air



**CITY OF HERCULES**  
111 CIVIC DRIVE, HERCULES, CA 94547  
PHONE: 415 • 799 • 8200

December 12, 1990

Henry D. Hilken  
Bay Area Air Quality  
Management District  
939 Ellis St.  
San Francisco, CA 94109

**SUBJECT: Notice of Preparation, 1991 Clean Air Plan**

Dear Mr. Hilken:

Thank you for the opportunity to comment on the Notice of Preparation for the draft EIR on the 1991 Clean Air Plan. The Initial Study indicates that the Plan requires both public agencies and private companies to implement new programs or actions that will impose new responsibilities and will require new staffing. The EIR should indicate the level of effort that will be required to implement each new program; levels of efforts for the public and the private sector should be discussed separately. The EIR should also discuss the (lack of) availability of funds to support these efforts and should identify new sources of funding. This information will allow the Air District and other agencies to evaluate the relative merit of funding new air quality programs, given the existing lack of funds to implement fully existing public service programs.

I will be the contact person for the City of Hercules on this project: please add me to your mailing list for all notifications regarding the EIR and the Plan.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin Garrett".

J. Kevin Garrett  
Planning Director

cc: City Manager

office/cleanair.pl

Ben G. Figueroa  
2862 Gonzaga Ave.  
Richmond, CA 94806  
222-3615

December 12, 1990

Bay Area Quality Management District  
Henry D. Hilken Planner  
939 Ellis St.  
San Francisco, CA 94109

Dear Sirs:

I have read your program for air pollution abatement and I don't see how gas can't reach your goal following your suggestions, because if now they are deficient, by 1994 they should be worse off, what with the increase of California population and the proliferation of motor vehicles.

Reading your paper I came to the conclusion that the real culprit is the automobile, then by simple logic it follows that the target should be to reduce autos and not to widen freeways or streets which would add more cars and create a faster moving traffic....for a while. To be effective one must bite the bullet: you must reduce the number of cars on the streets, and this even, it creates some difficulties because at least we will live longer. My opinion, what must be done, is PROHIBIT ON A GIVEN DAY CIRCULATION OF ALL CARS ENDING IN A CERTAIN NUMBER. Cars using alternative fuels will be exempt. Commercial cars will have one year to be adapted to alternative fuels or to be eliminated, if necessary, or to follow the general rule of not working one day of the week.

The plan might work in this way:

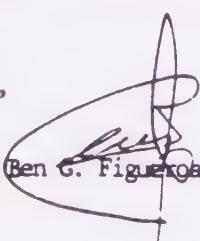
On Monday	all cars	with license plates ending in 0 or 1 do not circulate;
On Tuesday	"	" 2 or 3 "
On Wednesday	"	" 4 or 5 "
On Thursday	"	" 6 or 7 "
On Friday	"	" 8 or 9 "
On Saturday	"	" a letter do not "
ON Sundays and holidays	all cars circulate .	

If the amount of cars reduced is not sufficient to allow the air to reach the quality needed, then another number is added to the day to make it qualifiable; i.e. on Monday 0,1 & 2 do not circulate on Tuesdays cars ending in 3,4 or 5 do not circulate, etc. Also families owing two or three cars may for a reasonable fee have their final numbers changed so that they can have a car available every day of the week.

Heavy fines would be applied to violators of this ordinance so owners would be forced to use mass transit, bicycles or car pools or vehicles that run on electricity or alternative fuels .

A similar program has been carried out in Mexico City last year and the beginning of this year with success.

Sincerely,

  
Ben G. Figueroa, former MCAC member

c. Metropolitan Transit Commission ( Catalina Alvarado )  
San Francisco Chronicle ( letters to Editor )

December 21, 1990

Henry D. Hilken, Planner  
Bay Area Quality  
Management District  
939 Ellis Street  
San Francisco, CA 94109

Dear Mr. Hilken:

SUBJECT: Comments Regarding Notice of Preparation for 1991 Clean Air Plan

The City of Livermore is very interested in the development of the above plan, and we would like to receive notices of meetings and documents as they become available. We are specifically interested in proposed control measures and implementation programs and how they will affect the City, its resources, and current and proposed land use and circulation plans.

A principal concern with regard to the above is that projects or control measures such as HOV lanes, toll roads etc., proposed as part of the Plan could serve as generators or increase vehicle trips resulting in changes in circulation routes including: design features and capacities, emission patterns, or potentially significant changes in level of service and/or alignments for local streets, arterials and freeway interchanges. Noise, vibration, risk of upset, appearance, proximity to sensitive receptors and related land use incompatibilities identified in the Initial Study are also of concern with regard to the potential impact of transportation control measures applicable in the City or Tri-valley area.

We appreciate the opportunity to comment on these matters.

Sincerely,

*Eric Brown*

Eric Brown,  
Senior Planner

LIVERMORE



# City of Pleasant Hill

3300 N. MAIN STREET, PLEASANT HILL, CALIFORNIA 94523 PHONE (415) 944-3270

December 5, 1990

Henry D. Hilken, Planner  
Bay Area Air Quality  
Management District  
939 Ellis Street  
San Francisco, CA 94109

Dear Mr. Hilken:

This letter contains our comments on the Notice of Preparation for the Clean Air Plan.

It is our understanding that older vehicles contribute a significant amount to air pollution from mobile sources and we hope that a plan or plans for retiring such vehicles will be given serious consideration in the Draft EIR. This could also be related to a smoking vehicle reporting and abatement program.

Sincerely,

Dennis C. Mesick  
Senior Planner

DEPARTMENT OF COMMUNITY DEVELOPMENT  
330 WEST 20TH AVENUE  
SAN MATEO, CALIFORNIA 94403-1388



TELEPHONE  
BUILDING DIVISION (415) 377-3375  
PLANNING DIVISION (415) 377-3360  
HOUSING AND ECONOMIC  
DEVELOPMENT (415) 377-3390

December 12, 1990

Mr. Henry D. Hilken  
Bay Area Air Quality Management District  
939 Ellis Street  
San Francisco, CA 94109

Dear Mr. Hilken:

Thank you for the opportunity to comment on the Notice of Preparation for the EIR on the 1991 Clean Air Plan. The City of San Mateo would appreciate your including the following two items in the scope of the EIR:

1. Public Services: Please address the cost to local governments of implementing the proposed new regulations. Examples include the cost of preparation of Air Quality Elements to general plans, or activities associated with enforcement or collection of fees for management of parking pricing.
2. Transportation/Circulation: Please address the "spill over" parking impacts which would result from proposals for parking pricing. In locations where commercial districts abut residential uses, there will be strong incentives for employees or retail customers to avoid parking charges by parking on residential streets which will displace residential parking, increase vehicle travel patterns in search of parking, and increase safety conflicts with residents.

We look forward to future review of your EIR.

Sincerely,

Robert M. Brown  
Chief of Planning



File: 021.BAAQMD  
December 27, 1990

Mr. Henry Hilken  
Bay Area Air Quality Management District  
939 Ellis Street  
San Francisco, CA 94109

Dear Henry:

Thank you for the opportunity to comment on your forthcoming Environmental Impact Report. With two exceptions, Housing and Recreation, the items listed as either yes or maybe cover our concerns.

The two exceptions are as follows.

12. **Housing.** You have identified a No impact on housing yet indicate that the proposal may alter the location, distribution, density, or growth rate of the human population of an area (Population) and it may result in a substantial alteration of the present or planned land use of an area (Land Use). Alterations in land use would likely impact more on housing than commercial, industrial and/or recreational land uses.

19. **Recreation.** West County highways are used daily as primary routes to out-of-area recreation opportunities. Also, if people are encouraged to either walk or ride bicycles, the required infrastructure could result in increased recreational opportunities.

The contact person for this project will be Larry Sutton, City of Richmond Planning Department, 2600 Barrett Avenue, Richmond CA 94804.

Once again thank you for the opportunity to review your Notice of Preparation and please include us on future mailings.

Sincerely,

A handwritten signature in black ink, appearing to read "Larry Sutton".  
Larry Sutton  
Environmental Planner

City of San Leandro  
Civic Center, 835 E. 14th Street  
San Leandro, California 94577



January 3, 1991

Mr. Henry D. Hilken, Planner  
Bay Area Air Quality Management District  
939 Ellis Street  
San Francisco, CA 94109

RE: Notice of Preparation Draft EIR  
1991 Clean Air Plan

Dear Mr. Hilken:

This letter is in response to the Notice of Preparation of a Draft Environmental Impact Report for the 1991 Clean Air Plan which was received by the City of San Leandro from your agency. The following comments are offered regarding the Initial Study:

1. Item # 8, Land Use, questions whether the proposal will result in a substantial alteration of the present or planned land use of an area. The Initial Study response is "maybe". We believe that this should be a "yes", as we anticipate massive changes in the way agencies deal with and decide on land use development questions in light of the Clean Air Plan.
2. Item # 12, Housing, asks whether the proposal will affect existing housing, or create a demand for additional housing. The Initial Study indicates a response of "no". Again, we feel that this necessitates a "maybe" response, indicating the potential impact the Clean Air Plan will have on land use decisions, including location and density of housing.
3. Finally, it is of interest that the 1991 Clean Air Plan appears to be prepared without substantial concern for energy conservation. Although this matter is covered in the Initial Study, it should be more of an integral part of the study than simply a required part of the EIR. This issue has been raised previously, and concerns regarding energy and air quality should be addressed in the Clean Air Plan.

Dave Karp, Mayor

A-46



City Council: Ellen M. Corbett;

John E. Faria;

Bob Glaze;

Mike Gatto, Bill Balogun;

Archibald Santos;

Dick Randall, City Manager

Mr. Henry D. Hilken

2 .

January 3, 1991

Thank you for the opportunity to comment on the Notice of Preparation. We look forward to reviewing the EIR and providing further input at that time. If we may provide any additional information, please feel free to contact me at 577-3350.

Sincerely,

*Diane M. Henderson*

Diane M. Henderson  
Planning Consultant

DMH:ls

cc: M. Vitz  
B. Brassfield  
M. Oliver  
D. Randall

D:HENDERSON\CAPEIR.LTR

DEPARTMENT OF COMMUNITY DEVELOPMENT  
330 WEST 20TH AVENUE  
SAN MATEO, CALIFORNIA 94403-1388



TELEPHONE  
BUILDING DIVISION (415) 377-3375  
PLANNING DIVISION (415) 377-3360  
HOUSING AND ECONOMIC  
DEVELOPMENT (415) 377-3390

December 12, 1990

Mr. Henry D. Hilken  
Bay Area Air Quality Management District  
939 Ellis Street  
San Francisco, CA 94109

Dear Mr. Hilken:

Thank you for the opportunity to comment on the Notice of Preparation for the EIR on the 1991 Clean Air Plan. The City of San Mateo would appreciate your including the following two items in the scope of the EIR:

1. Public Services: Please address the cost to local governments of implementing the proposed new regulations. Examples include the cost of preparation of Air Quality Elements to general plans, or activities associated with enforcement or collection of fees for management of parking pricing.
2. Transportation/Circulation: Please address the "spill over" parking impacts which would result from proposals for parking pricing. In locations where commercial districts abut residential uses, there will be strong incentives for employees or retail customers to avoid parking charges by parking on residential streets which will displace residential parking, increase vehicle travel patterns in search of parking, and increase safety conflicts with residents.

We look forward to future review of your EIR.

Sincerely,

Robert M. Brown  
Chief of Planning

NORTHERN CALIFORNIA



# BUILDING INDUSTRY ASSOCIATION

2641 W. CROW CANYON ROAD • SUITE 1 • SAN RAMON, CA 94583  
(415) 820-7626

January 17, 1990

BAAQMD  
939 Ellis Street  
San Francisco, CA 94109  
Attn: Milton Feldstein

Re: Draft Environmental Impact Report

Dear Mr. Feldstein:

This is in response to your request for comments from our organization on the Notice of Preparation of a Draft Environmental Impact Report. I apologize for the tardiness of our comments; however, we have only recently been able to review this.

The Building Industry Association of Northern California (BIANC) represents approximately 75% of the homebuilding industry in the nine Bay Area Counties. Obviously, we are very interested in the content of the Clean Air Plan (CAP) and appreciate the opportunity to participate in the process.

We are interested in the following type of control measures and would appreciate being kept informed on: surface coating and solvent use and all available Transportation Control Measures.

Briefly, with regards to the specifics of the initial study, on page 4 item #12, we question whether the CAP would in fact have no significant impact on housing. We would argue that in fact it may have some impact. Since the study already acknowledges that population and land use might be affected, the same type of logic should apply to housing. There are many, particularly in the environmental community, who are advocating significant changes in housing supply. Due to possible land use changes and/or indirect source control rules, the possibility of being allowed to build fewer units exists. This scenario would in fact create a demand for additional housing. We urge you to revisit this issue.

Again, thank you for soliciting our comments. We look forward to working with you in the upcoming months on the CAP.

Sincerely,

Kassandra R. Fletcher  
Environmental Affairs Director

REGIONAL OFFICES: EASTERN  
Walnut Creek (415) 932-8884

EASTERN

Walnut Creek (415) 932-8884

WEST BAY

(415) 364-9008  
Redwood City

SOUTHERN

(408) 437-1390  
San Jose

NORTHERN

(707) 584-9133  
Rohnert Park

VS/91  
1/24

5m



December 20, 1990

Mr. Henry D. Hilken, Planner  
Bay Area Air Quality Management District  
939 Ellis Street  
San Francisco, Ca 94109

Subject: Draft Environment Impact Report; Project: 1991  
Clean Air Plan

475 14th Street  
Oakland, CA 94612-1903  
Telephone: 415/874-4800

Dear Mr. Hilken:

The Oakland Chamber of Commerce has been actively involved in the development of the Transportation Control Measures (TCM) Plan as prepared by the Metropolitan Transportation Commission for consideration by your agency in accordance with the requirements of the 1991 Clean Air Plan. The Oakland Chamber of Commerce is strongly committed to the concept of a market-based approach to air pollution reduction as being less costly and more effective and efficient than a regulatory/punitive model. We support the phasing program for implementation including the development of mobility options to shift even more patronage to public transit from single occupancy autos and the market-based contingency plan as outlined by the Bay Area Economic Forum which includes increasing vehicle occupancy through pricing means.

We are prepared to work with the Board members of the Bay Area Air Quality Management District and with the Metropolitan Transportation Commission to seek legislative action to implement increases in registration fees, gas tax, and peak hour bridge tolls, etc. to deter automobile usage and to provide a fund for the implementation of the transportation system management plan, improved public transit and other alternatives. We join with many other business organizations in opposition to non-work site parking and to consider only as a contingency, should the legislature not enact the above recommendations, a \$1.00 per day employer-based parking charge.

However, we urge that the staff of BAAQMD include in the detailed cost benefit analysis all the options pertaining to mobile sources and if appropriate to outline an implementation strategy which will have the least negative effect on the economy of the Bay Region.

Henry D. Hilken  
December 20, 1990  
Page Two

The Oakland Chamber of Commerce has devoted the major effort to the proposed mobile source controls, but we will await your report concerning the stationary source control measures and will review the report and take action as is appropriate to maintain the industrial segment of our economy.

All correspondence and questions should be directed to John Christensen, Manager of our Economic Development Department, at the address above. He is coordinating efforts with the various Chamber committees and should be the prime contact person for your organization.

Sincerely,

*Ted Dang*

Ted Dang  
Chairman of the Board

cc: BAAQMD Members:

Edward R. Campbell  
Shirley J. Campbell  
Loni Hancock  
Frank H. Ogawa  
Sunne Wright McPeak  
Tom Powers  
Rod Diridon

Mayor-Elect Elihu Harris

Lawrence D. Dahms, Executive Director, MTC

Chamber of Commerce:

Jim Ishimaru, Director, Economic Affairs  
David I. Wendel, Chairman, Surface Transp. Com.  
Mel Wall, Acting President  
John Christensen, Manager, Economic Development Dept.

# REGIONAL BICYCLE ADVISORY COMMITTEE

of the San Francisco Bay Area (REBAC)

3313 Grand Avenue Oakland, CA 94610

415-452-1221

January 3, 1991

Henry D. Hilken, Planner

Bay Area Air Quality Management District

939 Ellis Street

San Francisco, CA 94109

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Bicycling Organizations  
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League of American Wheelmen  
ELLEN FLETCHER

Sierra Club  
JOEL MARKOWITZ

## Re: Response to Draft EIR - 1991 Clean Air Plan

Dear Mr. Hilken:

The Regional Bicycle Advisory Committee (REBAC) has reviewed the Draft EIR for the Air District's 1991 Clean Air Plan and has the following comments. (Suggested changes are highlighted).

In the Initial Study, section III, paragraph 13, titled Transportation, the following statement is inaccurate and should be changed: "Measures that encourage walking and bicycle use could increase traffic hazards for pedestrians and bicyclists". This statement should be changed to read:

***"Measures that encourage walking and bicycle use would generally decrease traffic hazards for pedestrians and bicyclists, since such measures specifically specify that adequate curb lane widths for bicycles on roadways should be promoted".*** (See STCM 9). Increasing curb lane width will allow for safer bicycle use and reduce bicycle/auto conflicts. It would make cycling a more attractive option and also reduce bicycle/pedestrian conflicts.

We are pleased that the TCM Plan prepared by MTC will be incorporated into the 1991 CAP. We are specifically referring to STCM 9 - IMPROVE BICYCLE ACCESS, which we believe will help increase bicycle use, reduce automobile travel, and consequently, reduce air pollution.

We notice, however, that a significant portion of STCM 9, originally approved by MTC as STCM 7 on June 27, 1990, was omitted from the final TCM Plan. We request that you include the following omitted portion in your final 1991 Clean Air Plan:

***Cities should require developers to provide secure bicycle parking and showers and other facilities as part of the development approval process, effective after the 1991 Clean Air Plan is adopted.***

**ORGANIZATIONAL MEMBERS:** American Youth Hostels, Cherry City Cyclists, Corte Madera Cyclery, East Bay Bicycle Coalition, Fremont Freewheelers, Grizzly Peak Cyclists, League of American Wheelmen, Mike's Bicycle Center, Napa Bicycle Club, Pedaleria Bicycle Club, RIDES for Bay Area Commuters, San Mateo County Planning Division, Santa Clara Valley Bicycle Association, Sierra Club, Valencia Cyclery, Velo Bicycle Shop, Valley Spokesmen, Western Wheelers

**CONSULTING MEMBERS:** AC Transit, Association of Bay Area Governments (ABAG), Bay Conservation and Development Commission (BCDC), California Department of Transportation (CALTRANS), Environmental Protection Agency (EPA), Federal Highway Administration (FHA), Metropolitan Transportation Commission (MTC)

Henry Hilken  
January 3, 1991  
Page 2

The reason for including the above is that we believe it would not be practical to defer bicycle facilities for new developments as a requirement for the indirect source review process. The major bulk of developments would escape that process, since the threshold for inclusion is too high for most developments likely to be built.

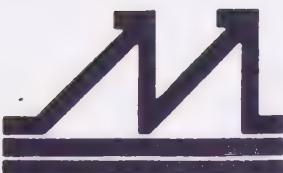
Our final recommendation suggests strengthening the implementation process:

**To insure implementation of STCM 9 we urge that the bicycle improvements specified therein become part of the cities' and counties' comprehensive bicycle plans, and that these bicycle plans be incorporated into their General Plans.**

We hope that our suggestions will be incorporated into the 1991 Clean Air Plan.

Sincerely

  
Alexander Zuckermann  
Chair



SANTA CLARA COUNTY  
MANUFACTURING GROUP

GARY BURKE  
President

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IBM Corporation

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President  
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Adviser to the Board  
DAVID PACKARD  
Chairman of the Board  
Hewlett-Packard Company

Working Council Chair  
JOHN HAMMETT  
Senior Vice President  
San Jose Mercury News

December 21, 1990

Henry D. Hilken, Planner  
Bay Area Air Quality Management District  
939 Ellis Street  
San Francisco, CA 94109

Dear Mr. Hilken:

This letter is to provide input on the draft environmental impact report for the 1991 Clean Air Plan, as described in the 11-27-90 notice of preparation.

The Santa Clara County Manufacturing Group has long been an advocate for policies that improve air quality and reduce traffic congestion. The voluntary results obtained by our member companies have been impressive. Accomplishments include reducing SARA III air emissions by 54 percent between 1987 and 1989 and initiating ridesharing and transit improvement programs.

While we support the overall goal and intention of the Clean Air Plan, we have specific concerns about proposed implementation strategies and Transportation Control Measures. We would ask that the points mentioned below be thoroughly examined and addressed in the environmental impact report.

1. The plan should track, address and explain present and any expected future adverse health risks related to air quality relative to other health risks.
2. The plan should address economic and health consequences of TCM's directed at commuters as opposed to addressing all mobile source contributors.
3. The plan should define "cost effectiveness," in terms of pounds of HC reduced per dollar spent, as well as "public acceptability," and "enforceability."
4. An analysis of parking charges or taxes should analyze all collection costs including construction, administration, and the logic and relative merits of using funds for employer driven programs vs. other mobility options.

Hilken  
Burke  
December 21, 1990  
Page 2

5. The plan should address consequences of any proposed TCM plan when transportation or mobility options are not readily available.
6. Analysis of indirect source guidelines should document cost benefit expected factoring in other site considerations such as chemical handling, energy use and waste disposal, etc.

Thank you for your consideration of the above noted items.

Sincerely,

Gary Burke  
President

GB:sdd

cc: Milton Feldstein

Bay Area. dcg



## SAN MATEO COUNTY ECONOMIC DEVELOPMENT ASSOCIATION, INC.

San Mateo BayCenter • 951 Mariner's Island Boulevard, Suite 260, San Mateo, California 94404  
Phone (415) 345-8300 • Fax (415) 345-6896 SAMCEDA

December 18, 1990

**PRESIDENT**  
Paul P. Shepherd  
Leslie Salt Company

**SENIOR VICE PRESIDENT**  
Paul O. Reimer  
Reimer Associates

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Carr, McClellan, Ingerson,  
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Joan Taylor & Associates

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**VICE PRESIDENT-AT-LARGE**  
Don Warren  
Redwood Shores Properties

**EXECUTIVE VICE PRESIDENT**  
Henry Bostwick, Jr.

Bay Area Air Quality Management District  
Attn: Henry D. Hilken, Planner  
939 Ellis St..  
San Francisco, Ca. 94109

Gentlemen:

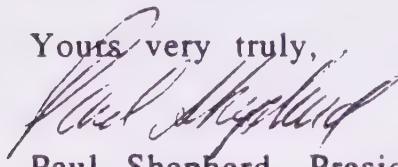
This is in connection with your notice dated 11/17/90  
Subject: Notice of Preparation of a Draft Environmental  
Impact Report.

For your information, this matter was taken before  
members of the Transportation Council Advisory Board of  
this organization on Thursday, December 11, 1990.

Members agreed unanimously in a major  
recommendation that the District in its preparation of  
the Environmental Impact Report quantify in detail the  
health benefits and particularly the economic impact of  
the proposals under consideration.

The proposed 1991 Clean Air Plan as proposed will have  
a far reaching effect on the total economy of the District  
and should be carefully considered in all negotiations.

Contact within this Association should be made through  
its current Executive Vice President, Henry Bostwick Jr. at  
the above noted address. You will be notified if any  
changes are made.

Yours very truly,  
  
Paul Shepherd, President

---

December 20, 1990

Henry D. Hilken, Planner  
Bay Area Air Quality  
Management District  
939 Ellis Street  
San Francisco, CA 94109

Dear Henry:

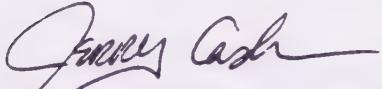
The following is in response to the Notice of Preparation of a Draft Environmental Impact Report.

Our company feels that the notice outlines most of the direct potential environmental impacts but leaves out many other important factors. We would strongly urge the Bay Area Air Quality Management District (BAAQMD) to include the interconnection between economic forces and environmental effects either in the Environmental Impact Report or in other appropriate avenues. The following are a sample of the issues that should be addressed:

- \* Will studies be done to look at the overall environmental and economic costs of vehicle trips? For example, parking fees address only one segment of a vehicle trip. Meanwhile, a more comprehensive market-based approach (with congestion fees, restructured vehicle registration fees, etc.) may provide BAAQMD with higher impact on air quality and trip reduction.
- \* What kinds of locational effects will the proposed Transportation Control Measures (TCMs) have on Bay Area businesses and residents? For example, what shifts are expected in the business mix and what effects will their movement have on air quality (i.e. is business activity expected to increase near large residential locations that already experience air quality problems - such as San Jose and Livermore)? Also, what kinds of residential shifts are expected as a result of the TCMs? For instance, will long-distance commuters decide to move closer to their work? While this may seem positive at first glance, people who live within 5 to 10 miles of their work site are often very dependent on single occupancy vehicle commuting. Meanwhile, long-distance commuters have the highest commute alternative percentage.

Please let me know what the Bay Area Air Quality Management District is planning to do to address these and other economic/environmental issues.

Sincerely,



Jerry Cashman, manager  
Commute Transportation Programs

cc: Gary Burke, Santa Clara County Manufacturing Group  
Mike McGill, Bay Area Economic Forum

Kaiser Permanente Medical Care Program  
Public Affairs Department  
1950 Franklin, 3rd Floor  
Oakland, California 94612-2998  
(415) 987-2703  
FAX (415) 987-2486



December 20, 1990

Henry D. Hilken  
Planner, Bay Area Air  
Quality Management District  
939 Ellis Street  
San Francisco, CA 94109

Dear Mr. Hilken:

Thank you for the opportunity to comment on your Notice of Preparation of a Draft Environmental Impact Report for the 1991 Clean Air Plan.

Kaiser Permanente is the largest health care organization in northern California and in your District. In the nine county Bay Area more than 1.8 million residents are Health Plan members (roughly 30% of the population); we employ approximately 22,000 individuals and operate facilities in 26 different cities. Medical care is largely based on people to people services and as these numbers suggest transportation to our hospitals and out-patient facilities is a key element of our ability to provide high quality medical care.

As a health care program we are also acutely aware of the medical problems, including death and disabilities, stress and dislocations caused by traffic accidents, congestion and air pollution. We agree with you that transportation is one of the major issues for the Bay Area and that policies and strategies need to be devised to change what has become an ever worsening traffic and air quality situation. However we would like to raise a few issues for you to consider in your deliberations.

We are already active in a number of TSM and employee trip reduction efforts such as subsidizing transit, ridesharing, shuttles to our medical centers. From our experience these measures are of some value but are limited in their effectiveness. The most effective measure appears to be the availability of good, convenient and reasonably priced public transit. It seems to us that effective public transit systems are needed in order to provide the alternative to vehicle trips. In fact it may be a prerequisite to the success of other strategies and we suggest that you may want to make expanding and improving public transit your first priority.

Other control measures such as smog fees and congestion pricing appear to be powerful tools to encourage more efficient vehicle use. However they may also adversely and disproportionately affect low income people or those who must commute from outlying areas. Because of the inherent inequalities, implementation must be done carefully and some policy adjustments may be necessary. Improved vehicle and fuel efficiency, such as required in the Federal Clean Air Act, and land use policies that increase use density near public transit stations appear to be sound policies.

We are concerned about how the proposed transportation and air quality policies and strategies become implemented. To our mind they need to be integrated into local government policies and practices and not become another separate bureaucracy. Local government use permits and the EIR process already require traffic analyses and mitigation measures. We would hope that any requirement from the State TCM Plan would be consistent with local government requirements. We are concerned also that the Independent Source Review could cause extended delays in permitting needed medical facilities, thus increasing the cost of designing and building new, modernized or expanded facilities.

Kaiser Permanente also sees a potential conflict between the goal of reducing vehicle trips and our goal of providing early and prompt medical care. We are proud of our efforts at screening, early diagnosis and treatment of medical care problems. These early interventions coupled with prevention programs are a key to holding down the cost of medical care. If user fees, mandatory parking or other costs to our program become high enough to discourage visits to our doctors and facilities, we would be defeating one societal goal in the pursuit of another.

From the June, 1990 MTC Draft State Transportation Control Measure Plan we understand that motor vehicles account for only 31.5% of the airborne hydrocarbons in the region (based on 1987 data). Clearly, measures that address the majority of airborne hydrocarbon pollution, i.e. the 68.5% not motor vehicles, need to be developed and we understand that this is what you also will be doing in your 1991 Clean Air Plan. Given that transportation control measures could raise the cost of delivering health services as well as disproportionately affect those who live in non-urban areas, have limited (or no) access to public transit, or who have limited incomes, we would urge caution and careful consideration of the ramifications of such proposals on other elements of society.

Thank you for the opportunity to offer comments to the discussion of transportation and air quality issues. Kaiser Permanente looks forward to working with the Air Quality District and local governments in the development of strategies and solutions that improve our quality of life without unduly affecting our ability to provide high quality health care in a cost effective manner or overburdening certain individuals in our communities.

Sincerely,



Bob Eisenman, Ph.D.  
Director, Community  
and Governmental Relations

cc: Milton Feldstein  
BAAQMD Directors  
Kaiser Distribution



Sunnyvale, California

December 21, 1990

The Honorable Osby Davis, Chairman  
Bay Area Air Quality Management District  
939 Ellis Street  
San Francisco, CA 94109

ATTENTION: ✓ Mr. Henry D. Hilken, Planner

Dear Chairman Davis and Members of the Board:

I am writing on behalf of Lockheed Missiles & Space Company (LMSC) regarding the 1991 Clean Air Plan which is required under the California Clean Air Act. We appreciate the opportunity to provide input on the proposed scope of the Draft Environmental Impact Report.

Lockheed appreciates the challenge of achieving air quality standards and meeting the requirements of the Clean Air Act. While we understand that measures must be implemented to reduce emissions from all sources, Lockheed has concerns about some elements of the Project Description transmitted in your letter of 11/27/90.

As the region's largest industrial employer, LMSC recognizes the role of employment-based transportation strategies in reducing traffic congestion and vehicle emissions. The company has a long history of supporting ridesharing programs--dating back to the early 70s when Lockheed's employee commute program was initiated. Today, the company offers a comprehensive ridesharing program to our 22,000 Santa Clara County employees (shuttle service, computerized ride matching, on-site transit information and ticket sales, commute coordinators).

LMSC's concern with the proposed TCMs are outlined in the attached letter to the Metropolitan Transportation Commission. Briefly, the concerns are fourfold:

- The transportation strategies proposed for adoption are the most costly and won't reach the goal.
- Second, the proposed TCMs are inequitable and place the burden of achieving air quality standards on the commuting workforce. The measures are also penalize to employees in suburban work sites which are not well served by transit versus downtown central business districts which are transit

- Third, in suburban work sites where free off-street parking has been a requirement of local government (and has come to be viewed as an employee benefit or right), the measure to mandate employee parking charges interferes with management/employees relations and affects employee benefit packages. This measure will be viewed as punitive to employees, particularly when viable transportation alternatives are not available.
- Fourth, mandatory employee parking charges(particularly for large, diverse companies with many remote work sites) may be a costly, administrative nightmare with little net benefit. Additionally, mandatory parking fees could prove to be counter-productive if companies shift their investment in positive ridesharing programs to the cost of parking management administration.

Lockheed concurs with the comments provided by the Santa Clara County Manufacturing Group. The DEIR should examine the economic impacts of the proposed measures and should define cost effectiveness, public acceptability and enforceability. In terms of mobile sources, the plan should address the economic consequences of TCM's directed at commuters versus those directed at all mobile sources. The DEIR should also track, address and explain present and expected adverse health risks related to air quality relative to other health risks.

We urge the Air District to adopt a comprehensive plan that is equitable, cost effective and addresses all sources. In terms of vehicle emissions, this plan should examine the market-based solutions included in MTC's TCM plan as "contingency measures." These strategies--congestion pricing, smog fees--may prove to have the greatest impact in achieving air quality standard.

Sincerely,

Katherine A. Strehl, Manager  
Government & Community Relations

cc    Byron Sher, California State Assembly  
          Milt Feldstein, BAAQMD

**Pacific Gas and Electric Company**

P.O. Box 7640  
San Francisco, CA 94120  
415/972-6901  
Telecopy 415/972-9201

John F. McKenzie  
Director  
Environmental Planning

December 27, 1990

Mr. Milton Feldstein  
Bay Area Air Quality  
Management District  
939 Ellis Street  
San Francisco, CA 94109

Dear Mr. Feldstein:

Re: Comments on Preparation of Draft Environmental  
Impact Report for 1991 Clean Air Plan

In response to your request for comments on the Bay Area Air Quality Management District's intent to prepare Draft Environmental Impact Report on the proposed 1991 Clean Air Plan, we would like to make the following suggestions. Pacific Gas and Electric (PG&E) encourages the District to include mobile source control measures in its 1991 Clean Air Plan (CAP) strategy. We would also like to offer whatever assistance we can to the District in developing an approach for clean fuel requirements.

Please keep us informed of further developments with the 1991 CAP. As you are aware PG&E has undertaken an aggressive compressed natural gas vehicle program. We are available to provide the District staff or members of the District's Board of Directors with information on PG&E's program or information on alternate fuels, and would be happy to arrange a natural gas vehicle demonstration. Please contact me if you have any questions relative to these matters.

Sincerely,

*JF McKenzie*

Ben G. Figueroa  
2862 Gonzaga Ave.  
Richmond, CA 94806  
222-3615

December 12, 1990

Bay Area Quality Management District  
Henry D. Hilken Planner  
939 Ellis St.  
San Francisco, CA 94109

Dear Sirs:

I have read your program for air pollution abatement and I don't see how gas can't reach your goal following your suggestions, because if now they are deficient, by 1994 they should be worse off, what with the increase of California population and the proliferation of motor vehicles.

Reading your paper I came to the conclusion that the real culprit is the automobile, then by simple logic it follows that the target should be to reduce autos and not to widen freeways or streets which would add more cars and create a faster moving traffic....for a while. To be effective one must bite the bullet: you must reduce the number of cars on the streets, and this even, it creates some difficulties because at least we will live longer; <sup>in</sup> My opinion, what must be done, is PROHIBIT ON A GIVEN DAY CIRCULATION OF ALL CARS ENDING IN A CERTAIN NUMBER. Cars using alternative fuels will be exempt. Commercial cars will have one year to be adapted to alternative fuels or to be eliminated, if necessary, or to follow the general rule of not working one day of the week.

The plan might work in this way:

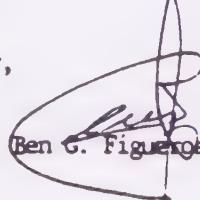
On Monday all cars with license plates ending in 0 or 1 do not circulate;  
On Tuesday " " " " " 2 or 3 " " "  
On Wednesday " " " " " 4 or 5 " " "  
On Thursday " " " " " 6 or 7 " " "  
On Friday " " " " " 8 or 9 " " "  
On Saturday " " " " " a letter do not "  
ON Sundays and holidays all cars circulate .

If the amount of cars reduced is not sufficient to allow the air to reach the quality needed, then another number is added to the day to make it qualifiable; i.e. on Monday 0,1 & 2 do not circulate on Tuesdays cars ending in 3,4 or 5 do not circulate, etc.  
Also families owing two or three cars may for a reasonable fee have their final numbers changed so that they can have a car available every day of the week.

Heavy fines would be applied to violators of this ordinance so owners would be forced to use mass transit, bicycles or car pools or vehicles that run on electricity or alternative fuels .

A similar program has been carried out in Mexico City last year and the beginning of this year with success.

Sincerely,



Ben G. Figueroa, former MCAC member

c. Metropolitan Transit Commission ( Catalina Alvarado)  
San Francisco Chronicle ( letters to Editor)

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**APPENDIX B:**  
**CALIFORNIA CLEAN AIR ACT (AB 2595)**

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## CHAPTER 1568

An act to amend Sections 39607, 40001, 40400, 40510, 41500, 42301, 42311, 42352, and 43013 of, to amend the heading of Chapter 2 (commencing with Section 41600) of Part 4 of Division 26 of, to add Sections 39608, 39609, 39610, 39611, 40522.5, 40716, 40717, 40717.5, 41503.1, 41503.2, 41503.3, 41503.4, 41503.5, 41712, 42301.1, 42302.1, 42311.2, 42402.5, 43000.5, 43018, and 43019 to, to add Chapter 10 (commencing with Section 40910) to Part 3 of Division 26 of, to amend and renumber Section 41604 of, to add and repeal Sections 39612 and 42311.1 of, to repeal and add Section 41503 of, and to repeal Sections 41600, 41601, 41602, and 41603 of, the Health and Safety Code, relating to air pollution.

[Approved by Governor September 30, 1988. Filed with Secretary of State September 30, 1988.]

### LEGISLATIVE COUNSEL'S DIGEST

AB 2595, Sher. Air pollution: districts.

(1) Under existing law, every air pollution control district and air quality management district is required to adopt and enforce regulations to achieve and maintain the state ambient air quality standards for the area under its jurisdiction, to enforce applicable state law, and to endeavor to achieve and maintain federal ambient air quality standards.

This bill would require the State Air Resources Board to establish criteria for designating an air basin attainment or nonattainment, to identify air basins which have attained or have not attained state standards and to identify as unclassified all those for which data is insufficient, to complete a study on or before December 31, 1989, and at least every 5 years thereafter on the feasibility of employing air quality models and other analytical techniques to distinguish between emission control measures on the basis of their air quality impact and to transmit the results of the study to every district for use in developing plans pursuant to (2), below, to identify and assess the incidence of transport of air pollutants between districts, and to transmit this information to the districts.

The bill would require the state board to report to the Legislature, by January 1, 1991, on the prospects for achieving state ambient air quality standards for suspended particulate matter, visibility reducing particles, lead, hydrogen sulfide, and sulfates, including specified information for each pollutant and each air basin.

The bill would authorize the state board, beginning July 1, 1989, to require districts to impose additional permit fees on nonvehicular sources authorized by district permit to emit 500 tons or more per year of a nonattainment pollutant or its precursors and require the amount

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additional fees.

districts to transmit these fees, after the administrative cost of collecting the fees, to the Controller for deposit in the Air Pollution Control Fund. The total of these fees, exclusive of the administrative costs, would be limited to \$3,000,000 in any fiscal year. The bill would require the state board to report to the Legislature, by January 1, 1993, on the amounts of fees collected and the purposes for which they were expended. The bill would make these provisions inoperative on July 1, 1997, and would repeal them on January 1, 1998.

The bill would require the districts, with respect to the attainment of state ambient air quality standards, to adopt and implement regulations to reduce emissions from indirect and areawide sources and to encourage or require ridesharing, vanpooling, flexible work hours, or other measures to reduce vehicle usage. The bill would require districts to adopt and enforce transportation control measures, as specified, and would permit them to enter into an agreement with a council of governments or a regional agency to jointly develop a plan for transportation control measures or to delegate this function to any local agency which prepares and submits to the district an implementation plan and meets additional conditions, as specified.

The bill would require the state board, the Business, Transportation and Housing Agency, and the Department of the California Highway Patrol to jointly establish a technical advisory group, composed as specified, to develop model guidelines and procedures for traffic control measures by districts affecting heavy-duty trucks, and would require every district except the south coast district to consider these guidelines prior to adopting traffic control measures for heavy-duty trucks.

The bill would require each district which has been designated a nonattainment area for state ambient air quality standards for ozone, carbon monoxide, sulfur dioxide, or nitrogen dioxide to prepare and submit to the state board a plan for attaining and maintaining state standards for these pollutants by December 31, 1990, or, in the case of a district which receives or contributes to transported air pollutants, by June 30, 1991. The bill would specify what the plan is to contain and schedules for achieving emissions reductions. The bill would require review and approval of the plans by the state board and would require the districts to submit annual and triennial progress reports thereon. The bill would permit a district to impose a surcharge for these purposes on emission sources regulated by the district.

The bill would require the state board to prepare and submit to the Governor and Legislature an annual report on sources of funding for districts with annual budgets exceeding \$1,000,000, including specified matters. The bill would make this provision inoperative on July 1, 1997, and would repeal it on January 1, 1998.

The bill would require the state board, by January 1, 1992, to adopt regulations to achieve the maximum technologically and

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commercially feasible reduction in reactive organic compounds emitted by specified categories of consumer products, if the state board determines that adequate data exists for it to adopt the regulations. The bill would prohibit a district from adopting any regulation relating to a consumer product different than a regulation of the state board, until January 1, 1994.

(2) Under existing law, the provisions relating to the South Coast Air Quality Management District are known as the Lewis Air Quality Management Act.

This bill would designate these provisions as the Lewis-Presley Air Quality Management Act.

The bill would also permit the south coast district to assess fees on areawide or indirect sources of emissions, other than wildland vegetative management burning and emergency incident training, as specified, which are regulated by the south coast district but for which permits are not issued, and would make additional technical, nonsubstantive changes.

(3) Under existing law, the south coast district may adopt rules and regulations to limit the operation of motor vehicles in the south coast district during air pollution emergency periods pursuant to the air pollution emergency plan of the state board. The state board is required to adopt emissions standards for motor vehicles.

This bill would permit the state board to adopt and implement motor vehicle in-use performance standards and motor vehicle fuel specifications. The bill would permit the state board to adopt standards and regulations for light-duty and heavy-duty motor vehicles; medium-duty vehicles, as determined by the state board; motorcycles; off-highway vehicles; construction equipment; farm equipment; utility engines; locomotives; and marine vessels. The bill would require the state board to consider specified technological affects of emission control standards for farm equipment, and to adopt no standard or regulation affecting locomotives until a specified study is completed and submitted to the Governor and Legislature.

The bill would require the state board, by January 1, 1992, to take whatever actions are necessary to achieve, with respect to vehicles and other mobile sources, a 55% reduction in emissions of organic gases, a 15% reduction in emissions of oxides of nitrogen, and the maximum feasible reductions in particulates, carbon monoxide, and toxic air contaminants. The bill would specify what the standards and regulations of the state board are to include and would require the state board to adopt a schedule of workshops and hearings to ensure attainment.

The bill would authorize the state board to adopt a schedule of annual fees for the certification of motor vehicles and engines, not to exceed \$4,500,000 plus any increase in the California Consumer Price Index, as specified, per year, and would direct the deposit of these fees in the Air Pollution Control Fund.

(4) Existing law requires districts to establish a system for the issuance of permits and variances and the charging of fees therefor, to ensure that every permitted article, machine, equipment, and contrivance does not prevent or interfere with the attainment of applicable air quality standards and will comply with applicable state board and district rules and regulations.

This bill would require a district to review every permit for compliance with existing district rules and regulations before renewal. The bill would permit a district to issue a temporary permit to operate for evaluation of compliance with the conditions specified in the authority to construct.

The bill would provide for hearings by the district hearing board, upon request by a person involved in the matter, to determine whether any permit was properly issued, and for appeal of the issuance of a permit by the hearing board to the state board for its reconsideration under specified conditions.

The bill would prohibit a district from imposing any fee exceeding actual administrative costs for regulatory activities or permits for prescribed burning operations on state responsibility lands conducted under a Department of Forestry and Fire protection permit, burning of vegetation or disposal of slash following timber operations under State Board of Forestry regulations, or wildland vegetation management burns.

The bill would revise the authority of district boards to impose fees for permits and variances by deleting a restriction that the fees of a district shall not exceed for any fiscal year the actual cost of district programs, adjusted for changes in the annual California Consumer Price Index, by permitting fees to be varied according to the quantity of emissions and their effect on ambient air quality, by permitting the adoption of fees to be assessed on areawide or indirect sources of emissions which are regulated, but for which permits are not issued, by the district and by permitting the adoption of fees to cover the costs incurred by hearing boards in hearing appeals from district decisions on the issuance of permits. The bill would permit the hearing board to waive all or a part of these fees if it determines that circumstances warrant a waiver. The bill would impose additional conditions on the hearing board's authority to grant variances.

(5) Existing law imposes both civil and criminal penalties for violations of these provisions.

This bill would also authorize a district to adopt rules and regulations imposing administrative civil penalties not exceeding \$300 for each violation.

(6) The California Constitution requires the state to reimburse local agencies and school districts for certain costs mandated by the state. Statutory provisions establish procedures for making that reimbursement.

By imposing these requirements on districts, the bill would impose a state-mandated local program.

The bill would provide that no reimbursement is required by this act for a specified reason.

*The people of the State of California do enact as follows:*

SECTION 1. (a) This act shall be known as the California Clean Air Act of 1988.

(b) The Legislature finds and declares as follows:

(1) That the State Air Resources Board has adopted ambient air quality standards, based upon the recommendation of the State Department of Health Services, and that attainment of these health-based standards is necessary to protect public health, particularly of children, older people, and those with respiratory diseases.

(2) That it is therefore in the public interest that these standards be attained at the earliest practicable date.

(3) That the basinwide air pollution control plans to attain and maintain the state standards which were prepared by air pollution control districts and air-quality management districts and the basinwide coordinating councils and implemented under the supervision of the state board have achieved progress, but are in need of revision to more accurately reflect changes in emission sources, technology, energy availability, and forecasts of population and economic growth, and that the requirements for preparation of the plans and deadlines for attainment should reflect the nature and extent of the air pollution problems of each region.

(4) That most urban areas of the state have not attained federal ambient air quality standards by August 31, 1988, as required by federal law, and that Congress has not extended the deadlines or removed the requirements for sanctions, and does not appear likely to resolve these issues in a timely manner.

(5) That in order to ensure the future health and welfare of the people of the State of California, and the state's environment and economy, are protected despite lack of action or direction from the federal government, it is necessary for the State of California to develop and implement its own program to attain air quality standards through the application of best available control technology and operating methods, improved motor vehicle maintenance and inspection, control of indirect and areawide sources of emissions, the required use of cleaner burning fuels, the implementation of stricter new vehicle emission standards and warranty requirements, the design and implementation of transportation control and vehicle fleet management measures, and the incorporation of air quality considerations into local land use planning decisions.

(c) It is, therefore, the intent of the Legislature, in enacting this act, that the state board and the districts, to the maximum extent practicable, shall coordinate activities required under this act with

similar activities undertaken pursuant to federal law.

SEC. 2. Section 39607 of the Health and Safety Code is amended to read:

39607. The state board shall:

(a) Establish a program to secure data on air quality in each air basin established by the state board.

(b) Inventory sources of air pollution within the air basins of the state and determine the kinds and quantity of air pollutants, including, but not limited to, the contribution of natural sources of emissions, to the extent feasible and necessary to carry out the purposes of this chapter. The state board shall use, to the fullest extent, the data of local agencies and other state and federal agencies in fulfilling this purpose.

(c) Monitor air pollutants in cooperation with districts and with other agencies to fulfill the purpose of this division.

(d) Adopt test procedures to measure compliance with its nonvehicular emission standards and those of districts.

(e) Establish criteria for designating an air basin attainment or nonattainment for any state ambient air quality standard set forth in Section 70200 of Title 17 of the California Code of Regulations. In developing these criteria, the state board shall consider instances where there is poor or limited ambient air quality data, highly irregular or infrequent violations, or projections of substantial growth in population or industrial activity. The state board shall provide an opportunity for public comment on the proposed criteria, and shall adopt the criteria after a public hearing.

(f) Evaluate, in consultation with the districts, air quality-related indicators which may be used to measure or estimate progress in the attainment of state standards and establish a list of approved indicators. The state board shall establish an initial list on or before December 31, 1989, and shall update the list at least every three years thereafter.

SEC. 3. Section 39608 is added to the Health and Safety Code, to read:

39608. (a) On or before September 30, 1989, the state board, in consultation with the districts, shall identify, pursuant to subdivision (e) of Section 39607, and classify each air basin which is in attainment and each air basin which is in nonattainment for any state ambient air quality standard. This identification and classification shall be made on a pollutant-by-pollutant basis. Where the state board finds that data is not sufficient to determine the attainment or nonattainment status for an air basin, the state board shall identify the air basin as unclassified.

(b) The state board may assign an attainment, nonattainment, or unclassified designation to one or more areas within any air basin unless the state board finds and determines that the pollutant for which the designation applies affects the entire region or is produced by emission sources throughout the region.

(c) Designations made by the state board shall be reviewed annually and updated as new information becomes available.

SEC. 4. Section 39609 is added to the Health and Safety Code, to read:

39609. On or before December 31, 1989, and at least every five years thereafter, the state board shall complete a study on the feasibility of employing air quality models and other analytical techniques to distinguish between emission control measures on the basis of their relative ambient air quality impact. The state board shall consult with districts and affected groups in conducting this study, and, after a public hearing, shall prepare and transmit its findings to each district for its use in developing plans pursuant to Chapter 10 (commencing with Section 40910).

SEC. 5. Section 39610 is added to the Health and Safety Code, to read:

39610. (a) Not later than December 31, 1989, the state board shall identify each district in which transported air pollutants from upwind areas outside the district cause or contribute to a violation of the state ambient air quality standard for ozone and shall identify the district of origin of the transported pollutants, based upon the preponderance of available evidence. The state board shall identify and determine the priorities of information and studies needed to make a more accurate determination, including, but not limited to, emission inventories, pollutant characterization, ambient air monitoring, and air quality models.

(b) The state board shall, in cooperation with the districts, assess the relative contribution of upwind emissions to downwind ambient pollutant levels to the extent permitted by available data, and shall establish mitigation requirements commensurate with the level of contribution.

(c) The state board shall make every reasonable effort to supply air pollutant transport information to heavily impacted districts prior to the development of plans to attain the state ambient air quality standards, shall consult with affected upwind and downwind districts, and shall adopt its findings at a public hearing.

(d) The state board shall review and update its transport analysis at least once every three years.

(e) The state board shall conduct appropriate studies to carry out its responsibilities under this section.

SEC. 6. Section 39611 is added to the Health and Safety Code, to read:

39611. Not later than January 1, 1991, the state board shall report to the Legislature on the prospects for achieving the state ambient air quality standards for suspended particulate matter, visibility reducing particles, lead, hydrogen sulfide, and sulfates. The report shall include, for each pollutant and for each air basin, a consideration of all of the following:

(a) The present and anticipated extent of nonattainment.

(b) Adopted and proposed measures to reduce emissions of a pollutant or its precursors, or both, and their anticipated effectiveness.

(c) The availability of additional control measures, and their potential effectiveness.

(d) The earliest practicable attainment date.

(e) Any legal, technological, or administrative impediments to developing and implementing an attainment plan.

(f) The relative significance of both natural and windblown emissions.

(g) Any additional information needed with respect to ambient air monitoring and air quality computer modeling, and the estimated budgetary requirements to obtain this information.

SEC. 6.5. Section 39612 is added to the Health and Safety Code, to read:

39612. (a) In addition to funds which may be appropriated by the Legislature to the state board to carry out the additional responsibilities and to undertake necessary technical studies required by this chapter, the state board, beginning July 1, 1989, may require districts to impose additional permit fees on nonvehicular sources within their jurisdiction.

(b) The permit fees imposed pursuant to this section shall be expended only for the purposes of recovering costs of additional state programs related to nonvehicular sources.

(c) The permit fees imposed pursuant to this section shall be collected from nonvehicular sources which are authorized by district permits to emit 500 tons or more per year of any nonattainment pollutant or its precursors.

(d) The permit fees collected by a district pursuant to this section after deducting the administrative costs to the district of collecting the fees, shall be transmitted to the Controller for deposit in the Air Pollution Control Fund.

(e) The total amount of funds collected by fees imposed pursuant to this section, exclusive of district administrative costs, shall not exceed three million dollars (\$3,000,000) in any fiscal year.

(f) On or before January 1, 1993, the state board shall prepare and submit to the Legislature a report on the amounts of fees collected and the purposes for which the fees were expended.

(g) This section shall become inoperative on July 1, 1997, and, as of January 1, 1998, is repealed, unless a later enacted statute, which becomes effective on or before January 1, 1998, deletes or extends the dates on which it becomes inoperative and is repealed.

SEC. 7. Section 40001 of the Health and Safety Code is amended to read:

40001. Subject to the powers and duties of the state board, the districts shall adopt and enforce rules and regulations to achieve and maintain the state and federal ambient air quality standards in all areas affected by emission sources under their jurisdiction, and shall

enforce all applicable provisions of state and federal law.

The rules and regulations may, and at the request of the state board shall, provide for the prevention and abatement of air pollution episodes which, at intervals, cause discomfort or health risks to, or damage to property of, a significant number of persons or class of persons.

SEC. 8. Section 40400 of the Health and Safety Code is amended to read:

40400. This chapter shall be known and may be cited as the "Lewis-Presley Air Quality Management Act."

SEC. 8.2. Section 40510 of the Health and Safety Code is amended to read:

40510. The south coast district board may adopt a fee schedule for the issuance of variances and permits to cover the cost of planning, inspection, and monitoring related thereto. Every person applying for a variance or a permit, notwithstanding Section 6103 of the Government Code, shall pay the fees required by the schedule.

The fees may be varied according to the quantity of emissions and the effect of those emissions on the ambient air quality within the south coast district.

SEC. 8.5. Section 40522.5 is added to the Health and Safety Code, to read:

40522.5. (a) In addition to any other fees authorized by this article, the south coast district may adopt, by regulation, a schedule of fees to be assessed on areawide or indirect sources of emissions which are regulated, but for which permits are not issued, by the south coast district to recover the costs of district programs related to these sources.

(b) The south coast district shall not, however, impose any fee under this section for either of the following:

(1) Wildland vegetative management burning, as described in subdivision (c) of Section 39011.

(2) Emergency incident training necessary for the protection of the community and public safety personnel.

SEC. 9. Section 40716 is added to the Health and Safety Code, to read:

40716. (a) In carrying out its responsibilities pursuant to this division with respect to the attainment of state ambient air quality standards, a district may adopt and implement regulations to accomplish both of the following:

(1) Reduce or mitigate emissions from indirect and areawide sources of air pollution.

(2) Encourage or require the use of ridesharing, vanpooling, flexible work hours, or other measures which reduce the number or length of vehicle trips.

(b) Nothing in this section constitutes an infringement on the existing authority of counties and cities to plan or control land use, and nothing in this section provides or transfers new authority over

such land use to a district.

SEC. 10. Section 40717 is added to the Health and Safety Code, to read:

40717. (a) A district shall adopt, implement, and enforce transportation control measures for the attainment of state or federal ambient air quality standards to the extent necessary to comply with Section 40918, 40919, or 40920.

(b) A district which has entered into an agreement with a council of governments or a regional agency to jointly develop a plan for transportation control measures shall develop the plan in accordance with all of the following:

(1) The district shall establish the quantity of emission reductions from transportation sources necessary to attain state and federal ambient air standards.

(2) The council of governments or regional agency, in cooperation with the district and any other person or entity authorized by the council of governments or regional agency, shall develop and adopt a plan to control emissions from transportation sources which will achieve the emission reductions established under paragraph (1). The plan shall include, at a minimum, a schedule for implementing transportation control measures, identification of potential implementing agencies and any agreements entered into by agencies to implement portions of the plan, and procedures for monitoring the effectiveness of and compliance with the measures in the plan. The council of governments or regional agency shall submit the plan to the district for its adoption according to a reasonable schedule developed by the district in consultation with the council of governments or regional agency.

(3) Upon receipt of the plan submitted by the council of governments or regional agency, the district shall review and approve or disapprove the plan in the following manner:

(A) The district shall review, adopt, and enforce the plan if it meets the criteria established by the district pursuant to paragraph (1) and has been submitted pursuant to the schedule established under paragraph (2).

(B) If the district determines that the plan does not meet the criteria established pursuant to paragraph (1), the district shall return the plan to the council of governments or regional agency with comments which identify the reasons the plan does not meet the criteria established pursuant to paragraph (1). Within 45 days, the council of governments or regional agency shall review the district's comments, revise the plan to meet the criteria established under paragraph (1), and resubmit the plan to the district. The district shall review and approve the revised plan if it meets the criteria established by the district pursuant to paragraph (1) and has been resubmitted to the district within 45 days.

(C) If the plan is not submitted pursuant to the schedule established under paragraph (2), or if a plan revised by a council of

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provisions*

governments or regional agency and resubmitted to a district pursuant to this subparagraph does not meet the criteria established under paragraph (1), the district shall develop, adopt, and enforce an alternative plan for transportation control measures.

(4) Whenever the district revises its establishment of the quantity of emission reductions from transportation sources necessary to attain state and federal ambient air standards, the plan shall be revised, adopted, and enforced in accordance with paragraphs (1), (2), and (3).

(c) Subdivision (b) shall not apply to the Sacramento County Air Pollution Control District if Assembly Bill 4355 of the 1987-88 Regular Session is enacted, in which case Assembly Bill 4355 shall govern preparation and enforcement of that plan for transportation control measures. However, if Assembly Bill 4355 is not enacted, subdivision (b) shall govern preparation and enforcement of that plan.

(d) Notwithstanding subdivision (b), a district located in a county of the third class shall develop a plan for transportation control measures as follows:

(1) The district, in consultation with the council of governments, shall develop, approve, and adopt criteria under which the plan shall be developed.

(2) The council of governments shall develop and adopt a plan for transportation control measures which meets the criteria established by the district, and shall submit the plan to the district for its review and adoption according to a reasonable schedule developed by the district in consultation with the council of governments.

(3) Upon receipt of the plan submitted by the council of governments, the district shall review and approve the plan if it meets the criteria established by the district pursuant to paragraph (1) and has been submitted pursuant to the schedule established under paragraph (2). If the district determines that the plan does not meet the criteria established pursuant to paragraph (1) or if the plan is not submitted pursuant to the schedule established under paragraph (2), the district shall develop and adopt an alternative plan for transportation control measures.

(e) A district may delegate any function with respect to implementation of transportation control measures to any local agency, if all of the following conditions are met:

(1) The local agency submits to the district an implementation plan which provides adequate resources to adopt and enforce the measures, and the district approves the plan.

(2) The local agency adopts and implements measures at least as stringent as those in the district plan.

(3) The district adopts procedures to review the performance of the local agency in implementing the measures to ensure compliance with the district plan.

(f) A district may revoke an authority granted under this section

if it determines that the performance of the local agency is in violation of this section or otherwise inadequate to implement the district plan.

(g) For purposes of this section, "transportation control measures" means any strategy to reduce vehicle trips, vehicle use, vehicle miles traveled, vehicle idling, or traffic congestion for the purpose of reducing motor vehicle emissions.

SEC. 10.5. Section 40717.5 is added to the Health and Safety Code, to read:

40717.5. (a) The state board, the Business, Transportation and Housing Agency, and the Department of the California Highway Patrol, using existing resources, shall jointly establish a technical advisory group which shall include, but not be limited to, representatives of the trucking industry, organized labor, shippers, retailers, and districts for the purpose of developing model guidelines and procedures for traffic control measures affecting heavy-duty trucks for use by districts. The technical advisory group shall consult with any interested person or entity in developing the model guidelines and procedures.

(b) The model guidelines and procedures shall, among other things, take into account any requirements of federal or state law which affect safety of operation of heavy-duty trucks, which require heavy-duty trucks and drivers to operate at certain times of day for the protection of public health and safety, and which are established under Section 25633 of the Business and Professions Code.

(c) Upon completion of the model guidelines by the technical advisory group established under subdivision (a), every district shall review and consider the model guidelines and procedures prior to adopting or revising any regulation imposing traffic control measures for heavy-duty trucks.

(d) This section does not apply to the south coast district, and nothing in this section limits or abridges the authority of the south coast district to adopt regulations affecting heavy-duty trucks pursuant to Section 40447.5.

SEC. 11. Chapter 10 (commencing with Section 40910) is added to Part 3 of Division 26 of the Health and Safety Code, to read:

#### CHAPTER 10. DISTRICT PLANS TO ATTAIN STATE AMBIENT AIR QUALITY STANDARDS

40910. It is the intent of the Legislature in enacting this chapter that districts shall endeavor to achieve and maintain state ambient air quality standards for ozone, carbon monoxide, sulfur dioxide, and nitrogen dioxide by the earliest practicable date. In developing attainment plans and regulations to achieve this objective, districts shall consider the full spectrum of emission sources and focus particular attention on reducing the emissions from transportation and areawide emission sources. Districts shall also consider the cost

effectiveness of their air quality programs, rules, regulations, and enforcement practices in addition to other relevant factors, and shall strive to achieve the most efficient methods of air pollution control. However, priority shall be placed upon expeditious progress toward the goal of healthful air.

40911. (a) Except as provided in subdivision (b), each district which has been designated a nonattainment area for state ambient air quality standards for ozone, carbon monoxide, sulfur dioxide, or nitrogen dioxide shall prepare and submit a plan for attaining and maintaining the standards to the state board not later than December 31, 1990.

(b) Notwithstanding subdivision (a), any district which is a receptor or contributor of transported air pollutants, as determined by the state board pursuant to subdivision (a) of Section 39610, shall prepare and submit its plan to the state board not later than June 30, 1991.

40912. The plans for districts responsible for or affected by air pollutant transport shall provide for attainment and maintenance of the state and federal standards in both the upwind and downwind district. Each upwind district's plan shall contain, at a minimum, all mitigation requirements established by the state board pursuant to subdivision (b) of Section 39610. Each downwind district's plan shall contain sufficient measures to reduce emissions originating in the district below the level at which violations of state ambient air quality standards would occur in the absence of the transport contribution.

40913. (a) Each district plan shall be designed to achieve and maintain the state standards by the earliest practicable date, as determined by the district and subject to the approval of the state board, and in consideration of all relevant factors, including, but not limited to, the following:

(1) Present and projected maximum ambient pollutant concentration.

(2) Distribution and frequency of violations.

(3) Transport contributions.

(4) Projected emission increases based on industrial, vehicular, or population growth.

(5) Emission inventory characteristics.

(6) Anticipated effectiveness of available and potential control measures.

(7) Emission reductions occurring in, or expected to occur in, the district.

(b) Each district plan shall be based upon a determination by the district board that the plan is a cost-effective strategy to achieve attainment of the state standards by the earliest practicable date.

40914. (a) Each district plan shall be designed to achieve a reduction in districtwide emissions of 5 percent or more per year for each nonattainment pollutant or its precursors, averaged every

consecutive three-year period, unless an alternative measure of progress is approved pursuant to Section 39607.

(b) A district may use an alternative emission reduction strategy which achieves less than an average of 3 percent per year reduction in districtwide emissions if the district demonstrates to the state board, and the state board concurs in, either of the following:

(1) That the alternative emission reduction strategy is equal to or more effective than districtwide emission reductions in improving air quality.

(2) That despite the inclusion of every feasible measure in the plan, and an expeditious adoption schedule, the district is unable to achieve at least a 3 percent annual reduction in districtwide emissions.

(c) For purposes of this section and Section 41503.1, reductions in emissions shall be calculated with respect to the actual level of emissions which exist in each district on December 31, 1987. All reductions in emissions occurring after December 31, 1987, including, but not limited to, reductions in emissions resulting from measures adopted prior to December 31, 1987, shall be included in this calculation.

40915. Each district plan shall contain contingency measures to be implemented upon a finding by the state board, pursuant to Section 41503.3, that the district is failing to achieve interim goals or maintain adequate progress toward attainment. Any regulations necessary to implement the contingency measures shall be adopted by the district within 180 days following the state board's determination of inadequate progress.

40916. (a) The state board shall make technical assistance available to a district, at its request, to support attainment planning and air pollutant transport planning and associated analyses. If the state board lacks sufficient resources to make technical assistance available to each district which requests assistance, the state board shall give priority to districts which have limited financial or technical capabilities.

(b) The state board shall develop guidelines for use by the districts to prepare emission inventories, develop monitoring networks, and develop methods for the validation of air quality models.

40917. Two or more districts within the same air basin shall cooperate to the extent reasonable and appropriate in developing plan elements of mutual concern. These elements may include, but are not limited to, emission inventories, air quality models, and growth projections.

40918. (a) Each district with moderate air pollution shall, to the extent necessary to meet the requirements of the plan developed pursuant to Section 40913, include the following measures in its attainment plan:

(1) A permitting program designed to achieve no net increase in

emissions of nonattainment pollutants or their precursors from new or modified stationary sources which emit or have the potential to emit 25 tons per year or more of nonattainment pollutants or their precursors.

(2) Reasonably available control technology for all existing sources.

(3) Reasonably available transportation control measures.

(4) Provisions to develop area source and indirect source control programs.

(5) Provisions to develop and maintain an emissions inventory system to enable analysis and progress reporting and a commitment to develop other analytical techniques to carry out its responsibilities pursuant to subdivision (b) of Section 40924.

(6) Provisions for public education programs to promote actions to reduce emissions from transportation and areawide sources.

(b) A district's air pollution is moderate if the state board finds and determines that the district can attain and maintain the applicable state standard by not later than December 31, 1994.

40919. (a) Each district with serious air pollution shall, to the extent necessary to meet the requirements of the plan adopted pursuant to Section 40913, include the following measures in its attainment plan:

(1) All measures required for moderate nonattainment areas, as specified in Section 40918.

(2) A permitting program designed to achieve no net increase in emissions of nonattainment pollutants or their precursors from all permitted new or modified stationary sources.

(3) Transportation control measures to substantially reduce the rate of increase in passenger vehicle trips and miles traveled per trip.

(4) A requirement for the application of the best available retrofit control technology, as defined in Section 40406, to existing stationary sources.

(b) A district's air pollution is serious if the state board finds and determines that the district cannot attain and maintain the applicable state standard until after December 31, 1994, but can attain and maintain the standard by not later than December 31, 1997.

40920. (a) Each district with severe air pollution shall, to the extent necessary to meet the requirements of Section 40913, include the following measures in its attainment plan:

(1) All measures required for moderate and serious nonattainment areas, as specified in Sections 40918 and 40919.

(2) Transportation control measures to achieve an average during weekday commute hours of 1.5 or more persons per passenger vehicle by 1999, and no net increase in vehicle emissions after 1997.

(3) Measures to achieve the use of a significant number of low-emission motor vehicles by operators of motor vehicle fleets.

(4) Measures sufficient to reduce overall population exposure to

ambient pollutant levels in excess of the standard by at least 20 percent by December 31, 1994, 40 percent by December 31, 1997, and 50 percent by December 31, 2000, based on average per capita exposure and the severity of the exceedences, so as to minimize health impacts, using the average level of exposure experienced during 1986 through 1988 as the baseline.

(b) A district's air pollution is severe if the state board finds and determines that the district cannot attain and maintain the applicable state standard until after December 31, 1997, or is unable to identify an attainment date.

40921. For the purposes of Sections 40918, 40919, and 40920, the designation of a district's air pollution as "moderate," "serious," or "severe" for an area which is a receptor of transported air pollutants shall be based on violations of state ambient air quality standards which would occur without regard to the transport contribution.

40922. (a) Each plan prepared pursuant to this chapter shall include an assessment of the cost effectiveness of available and proposed control measures and shall contain a list which ranks the control measures from the least cost-effective to the most cost-effective.

(b) In developing an adoption and implementation schedule for a specific control measure, the district shall consider the relative cost effectiveness of the measure, as determined under subdivision (a), as well as other factors including, but not limited to, technological feasibility, total emission reduction potential, the rate of reduction, public acceptability, and enforceability.

40923. (a) Upon the state board's approval of a district's attainment plan, and annually thereafter, the district shall publish a list of regulatory measures scheduled or tentatively scheduled for consideration during the following year. The district shall not propose a regulatory measure for consideration during any year that is not contained in the district's most recently published list of proposed regulatory measures unless earlier consideration is necessary to satisfy federal requirements, to abate a substantial endangerment to public health or welfare, or to comply with Section 39666 or 40915.

(b) Subdivision (a) does not apply to any modification of existing rules which the district finds and determines is necessary to preserve the original intent of the rules, as stated upon their adoption.

40924. (a) Each year following the state board's approval of a district's attainment plan, the district shall prepare and submit a report to the board summarizing its progress in meeting the schedules for developing, adopting, or implementing the air pollution control measures contained in the plan.

(b) Every third year following the state board's approval of the district's attainment plan, the district shall assess the overall effectiveness of its air quality program, the quantity of emission reductions actually achieved in the preceding three-year period, and

the rate of population and industrial- and vehicular-related emissions growth experienced in the district and projected for the future, and shall contrast all of the preceding to the assumptions and goals contained in the district's attainment plan. The district shall also assess the extent of air quality improvement achieved during the preceding three years, based upon ambient pollutant measurements and best available modeling techniques. Upon completion of each triennial analysis, the district shall adopt its findings at a public hearing and report its findings to the state board.

40925. (a) Every district shall review its attainment plan at least once every three years to correct for deficiencies in meeting the interim measures of progress incorporated into the plan pursuant to Section 40914, and to incorporate new data or projections into the plan.

(b) A district may modify the emission reduction strategy or alternative measure of progress for subsequent years based on this assessment if the district demonstrates to the state board, and the state board finds, that the modified strategy is at least as effective in improving air quality as the strategy which is being replaced.

(c) Each district which will not attain the state standard for ozone within five years after approval of its plan by the state board, and which cannot demonstrate attainment by January 1, 2000, shall prepare and submit a comprehensive update of its plan to the state board not later than December 31, 1998. The revised plan shall include an interim air quality improvement goal or an equivalent emission reduction strategy, subject to review and approval by the state board, to be achieved in the subsequent five-year period.

40926. Nothing in this chapter restricts the authority of the state board or a district to adopt regulations to control suspended particulate matter, visibility reducing particles, lead, hydrogen sulfide, or sulfates, or their precursors.

SEC. 12. Section 41500 of the Health and Safety Code is amended to read:

41500. To coordinate air pollution control activities throughout the state, and to ensure that the entire state is, or will be, in compliance with the standards adopted pursuant to Section 39806, the state board shall do all of the following:

(a) Review the district attainment plans submitted pursuant to Section 40911, and the revised plans submitted pursuant to Section 40925, to determine whether the plans will achieve and maintain the state's ambient air quality standards by the earliest practicable date.

(b) Review the rules and regulations and programs submitted by the districts pursuant to Section 40704 to determine whether they are sufficiently effective to achieve and maintain the state ambient air quality standards.

(c) Review the enforcement practices of the districts and local agencies delegated authority by districts pursuant to Section 40717 to determine whether reasonable action is being taken to enforce their

programs, rules, and regulations.

SEC. 13. Section 41503 of the Health and Safety Code is repealed.

SEC. 14. Section 41503 is added to the Health and Safety Code, to read:

41503. (a) Within 12 months of receiving each district's attainment plan developed pursuant to Section 40911, the state board shall determine whether the attainment date specified in the plan represents the earliest practicable date and whether the measures contained in the plan are sufficient to achieve and maintain state ambient air quality standards.

(b) Where regional air pollution is involved, the state board shall conduct its review to include the plans of every district in the air basin, and shall determine whether the combination of measures in all the plans is sufficient to achieve and maintain state ambient air quality standards throughout the air basin. The state board shall hold at least one public hearing in each affected air basin prior to reaching a final determination of the sufficiency of the plans. The state board shall require control measures for the same emission sources to be uniform throughout the air basin to the maximum extent feasible, unless a district demonstrates to the satisfaction of the state board that adoption of the measure within its jurisdiction is not necessary to achieve or maintain the state ambient air quality standard.

(c) Where air pollutant transport is a factor, the state board shall determine whether the attainment plan is sufficient to satisfy the requirements of Section 40912.

(d) If a district is unable to specify an attainment date and the state board concurs that projecting an attainment date is not feasible, the state board shall determine whether the plan contains every feasible control strategy or measure to ensure progress toward attainment is maintained.

(e) In making determinations under subdivisions (a), (b), (c), and (d), the state board shall consider any emission reductions occurring in, or expected to occur in, the district or air basin.

SEC. 15. Section 41503.1 is added to the Health and Safety Code, to read:

41503.1. The state board may approve an attainment plan which achieves less emission reductions than 5 percent per year, or less than 15 percent every three years, as specified in Section 40914, if the state board determines that the district is unable to meet these requirements, despite the expeditious adoption of all feasible controls, or if the state board determines that the equivalent air quality improvement will be achieved through an alternate level of emissions reduction.

SEC. 16. Section 41503.2 is added to the Health and Safety Code, to read:

41503.2. (a) If the state board concludes that a district's plan does not meet the requirements of Section 41503, the state board shall notify the district of all deficiencies in writing. The district shall

correct the deficiencies identified by the state board, and shall submit its revised plan to the state board for approval.

(b) If the district does not concur with the state board's findings and determinations of deficiency, or the state board determines that the district's plan revisions are inadequate to remedy identified deficiencies, the state board and the district shall attempt to resolve the differences within three months of the board's disapproval. The state board and the districts shall develop a uniform conflict resolution procedure, for purposes of this subdivision, prior to any district's submittal of its attainment plan to the state board.

(c) If a conflict between the state board and district cannot be resolved, the state board shall take all of the following actions:

(1) Conduct a public hearing in the air basin containing the affected district for purposes of hearing testimony on the plan and the deficiencies identified by the state board pursuant to subdivision (a).

(2) Prior to conducting the hearing, provide a 45-day written notice to the affected district and to the public of the date, time, location, and subject of the hearing.

(3) After conducting the public hearing on the plan and the deficiencies identified by the state board, revise the district's plan as it finds and determines necessary.

SEC. 17. Section 41503.3 is added to the Health and Safety Code, to read:

41503.3. Upon receipt of a district's triennial progress report and plan revisions prepared pursuant to subdivision (b) of Section 40924, the state board shall determine whether the district has achieved the minimum rate of progress under Section 40914 or as adjusted by the board pursuant to Section 41503.1. The state board shall require the adoption of one or more contingency measures when the minimum rate of progress has not been achieved, unless the district demonstrates to the satisfaction of the state board that the discrepancy will be corrected and the deficiency restored during the next reporting period.

SEC. 18. Section 41503.4 is added to the Health and Safety Code, to read:

41503.4. All actions of the state board to approve, revise and approve, or disapprove a district's attainment plan or plan revision shall be taken at a noticed public hearing.

SEC. 19. Section 41503.5 is added to the Health and Safety Code, to read:

41503.5. The state board shall ensure that a district's attainment plan and plan revisions meet the requirements of this part and of Part 3 (commencing with Section 40000), and that every reasonable action is taken to achieve the state ambient air quality standards for ozone, carbon monoxide, nitrogen dioxide, and sulfur dioxide at the earliest practicable date.

SEC. 20. The heading of Chapter 2 (commencing with Section

41600) of Part 4 of Division 26 of the Health and Safety Code amended to read:

## CHAPTER 2. BASINWIDE MITIGATION FOR COGENERATION AND RESOURCE RECOVERY PROJECTS

SEC. 21. Section 41600 of the Health and Safety Code is repealed.

SEC. 22. Section 41601 of the Health and Safety Code is repealed.

SEC. 23. Section 41602 of the Health and Safety Code is repealed.

SEC. 24. Section 41603 of the Health and Safety Code is repealed.

SEC. 25. Section 41604 of the Health and Safety Code is amended and renumbered to read:

41600. (a) The districts shall provide for, and shall periodically revise as appropriate, the growth allowances necessary to accommodate the net air quality impact, if any, of cogeneration technology projects and resource recovery projects expected to be permitted by January 1, 1987, and subsequent periods thereafter, pursuant to Section 42314, so that state and federal ambient air quality standards may be achieved and maintained or that reasonable further progress be made toward attainment.

(b) If appropriate, the districts shall submit to the state board, for inclusion in the next state implementation plan revisions, the necessary control measures for the growth allowances for federally approved nonattainment pollutants and precursors required by subdivision (a).

(c) Any district which lacks a federally approved demonstration of attainment with the national ambient air quality standard for ozone or nitrogen dioxide is not required to provide a growth allowance for any pollutant under this section until two years after the district makes both demonstrations. Federal approval shall be determined, based on regulations adopted by the Environmental Protection Agency, after public notice and opportunity for comment. After a district demonstrates attainment, the district may establish a growth allowance by allocating an air quality increment within the ambient air quality standard or through adoption of further control measures.

SEC. 26. Section 41712 is added to the Health and Safety Code, to read:

41712. (a) On or before January 1, 1992, the state board shall adopt regulations to achieve the maximum feasible reduction in reactive organic compounds emitted by consumer products, if the state board determines that adequate data exists for it to adopt the regulations.

(b) The state board shall not adopt regulations pursuant to subdivision (a) unless the regulations are technologically and commercially feasible, and necessary to carry out this division.

(c) For purposes of this section, a "consumer product" means a chemically formulated product used by household and institutional

ROG  
reductions  
from consumer  
products

consumers, including, but not limited to, detergents; cleaning compounds; polishes; floor finishes; cosmetics; personal care products; home, lawn, and garden products; disinfectants; sanitizers; and automotive speciality products but do not include paint, furniture coatings, or architectural coatings.

(d) Prior to January 1, 1994, a district shall adopt no regulation relating to a consumer product which is different than any regulation adopted by the state board for that purpose.

SEC. 27. Section 42301 of the Health and Safety Code is amended to read:

42301. A permit system established pursuant to Section 42300 shall do all of the following:

(a) Ensure that the article, machine, equipment, or contrivance for which the permit was issued shall not prevent or interfere with the attainment or maintenance of any applicable air quality standard.

(b) Prohibit the issuance of a permit unless the air pollution control officer is satisfied, on the basis of criteria adopted by the district board, that the article, machine, equipment, or contrivance will comply with all applicable orders, rules, and regulations of the district and of the state board and with all applicable provisions of this division.

(c) Require, upon annual renewal, that each permit be reviewed to determine that permit conditions are adequate to ensure compliance with, and the enforceability of, district rules and regulations applicable to the article, machine, equipment, or contrivance for which the permit was issued which were in effect at the time the permit was issued or modified, or which have subsequently been adopted and made retroactively applicable to an existing article, machine, equipment, or contrivance, by the district board and, if the conditions are not consistent, require that the permit be revised to specify the permit conditions in accordance with all applicable rules and regulations.

(d) Provide for the reissuance or transfer of a permit to a new owner or operator of an article, machine, equipment, or contrivance. An application for transfer of ownership only, or change in operator only, of any article, machine, equipment, or contrivance which had a valid permit to operate within the two-year period immediately preceding the application is a temporary permit to operate. Issuance of the final permit to operate shall be conditional upon a determination by the district that the criteria specified in subdivisions (b) and (c) are met, if the permit was not surrendered as a condition to receiving emission reduction credits pursuant to banking or permitting rules of the district. However, under no circumstances shall the criteria specify that a change of ownership or operator alone is a basis for requiring more stringent emission controls or operating conditions than would otherwise apply to the article, machine, equipment, or contrivance.

SEC. 28. Section 42301.1 is added to the Health and Safety Code, to read:

42301.1. Whenever necessary and appropriate to ensure compliance with all applicable conditions prior to issuance of a permit to operate an article, machine, equipment, or contrivance, a district may issue a temporary permit to operate. The temporary permit to operate shall specify a reasonable period of time during which the article, machine, equipment, or contrivance may be operated in order for the district to determine whether it will operate in accordance with the conditions specified in the authority to construct.

SEC. 28.5. Section 42302.1 is added to the Health and Safety Code, to read:

42302.1. Within 10 days of any decision or action pertaining to the issuance of a permit by a district, any aggrieved person who, in person or through a representative, appeared, submitted written testimony, or otherwise participated in the action before the district may request the hearing board of the district to hold a public hearing to determine whether the permit was properly issued. Within 30 days of the request, the hearing board shall hold a public hearing and shall render a decision on whether the permit was properly issued.

SEC. 29. Section 42311 of the Health and Safety Code is amended to read:

42311. (a) A district board may adopt, by regulation, a schedule of annual fees for the evaluation, issuance, and renewal of permits to cover the cost of district programs related to permitted stationary sources authorized or required under this division that are not otherwise funded. The fees assessed under this section shall not exceed, for any fiscal year, the actual costs for district programs for the immediately preceding fiscal year with an adjustment not greater than the change in the annual California Consumer Price Index, as determined pursuant to Section 2212 of the Revenue and Taxation Code, for the preceding year. Any revenues received by the district pursuant to the fees, which exceed the cost of the programs, shall be carried over for expenditure in the subsequent fiscal year, and the schedule of fees shall be changed to reflect that carryover. Every person applying for a permit, notwithstanding Section 6103 of the Government Code, shall pay the fees required by the schedule. Nothing in this subdivision precludes the district from recovering, through its schedule of annual fees, the estimated reasonable costs of district programs related to permitted stationary sources.

(b) The district board may require an applicant to deposit a fee in accord with the schedule adopted pursuant to subdivision (a) prior to evaluating a permit application, if the district accounts for the costs of its services and refunds to the applicant any significant portion of the deposit which exceeds the actual, reasonable cost of evaluating the application.

(c) Except as provided in Section 42313, all the fees shall be paid

to the district treasurer to the credit of the district.

(d) This section does not apply to the south coast district board which is governed by Section 40510.

(e) In addition to providing notice as otherwise required, before adopting a regulation establishing fees pursuant to this section, the district board shall hold at least one public meeting, at which oral or written presentations can be made, as part of a regularly scheduled meeting. Notice of the time and place of the meeting, including a general explanation of the matter to be considered, and a statement that the information required by this section is available, shall be mailed at least 14 days prior to the meeting to any interested party who files a written request with the district board. Any written request for the mailed notices shall be valid for one year from the date on which it is filed unless a renewal request is filed. Renewal requests for the mailed notices shall be filed on or before April 1 of each year. The district board may establish a reasonable annual charge for sending the notices based on the estimated cost of providing that service. At least 10 days prior to the meeting, the district board shall make available to the public information indicating the amount of cost, or estimated cost, required to provide the service for which the fee is charged and the revenue sources anticipated to provide the service. Any costs incurred by the district board in conducting the required meeting may be recovered from fees charged for the programs which were the subject of the meeting.

(f) In addition to any other fees authorized by this section, a district board may adopt, by regulation, a schedule of annual fees to be assessed against permitted nonvehicular sources emitting toxic air contaminants identified pursuant to the procedure set forth in Sections 39660, 39661, and 39662. A district board shall demonstrate that the fees assessed under this subdivision do not exceed the reasonable, anticipated costs of funding district activities mandated by Section 39666 related to nonvehicular source emissions. In making the demonstration, the district shall account for all direct and indirect costs of district activities related to each toxic air contaminant. If the district does not make this demonstration, it shall make reimbursement for that portion of the fee not determined to be reasonable.

(g) A district may adopt, by regulation, a schedule of fees to be assessed on areawide or indirect sources of emissions which are regulated, but for which permits are not issued, by the district to recover the costs of district programs related to these sources.

(h) A district board may adopt, by regulation, a schedule of fees to cover the reasonable costs of the hearing board incurred as a result of appeals from district decisions on the issuance of permits. However, the hearing board may waive all or part of these fees if it determines that circumstances warrant that waiver.

(i) Nothing in the amendments to this section enacted in 1988

limits or abridges any previously existing authority of a district to vary fees according to quantity of emissions, nor affects any pending litigation which might affect that previous authority.

SEC. 29.2. Section 42311.1 is added to the Health and Safety Code, to read:

42311.1. (a) On or before July 1, 1990, and at least once every two years thereafter, the state board shall prepare a report on the sources of funding for each district with an annual budget which exceeds one million dollars (\$1,000,000). The report shall include all of the following:

(1) The annual budget of each district, based upon the most recent fiscal year for which data are available.

(2) A description of each district's budgetary process, including, but not limited to, criteria for allocating costs.

(3) A description of current funding sources for district programs, including, but not limited to, fees, state subventions, federal grants, and local tax revenues, and the approximate amount each source contributes to the district's annual budget.

(4) A comparison of the fees paid by different industries within each district, to the extent these data are available.

(5) A description of program needs, if any, which are not met by current funding levels.

(6) For a district which adopts a schedule of fees for issuance of permits for activities described under Section 42311.2, a comparison between the fees paid by persons or entities issued a permit and district administrative costs for issuing and enforcing those permits.

(b) Every district included within subdivision (a) shall provide data and analyses to the state board for inclusion in the report.

(c) The state board shall consult with districts and other interested parties prior to preparing the report required under subdivision (a).

(d) Upon adoption of the report described in subdivision (a), the state board shall transmit copies of the report to the Governor and the Legislature.

(e) This section shall become inoperative on July 1, 1997, and, as of January 1, 1998, is repealed, unless a later enacted statute, which becomes effective on or before January 1, 1998, deletes or extends the dates on which it becomes inoperative and is repealed.

SEC. 29.4. Section 42311.2 is added to the Health and Safety Code, to read:

42311.2. (a) Notwithstanding Section 42311, a district shall not adopt or impose fees which exceed actual district administrative costs for processing or enforcing permits applicable to any of the following:

(1) Prescribed burning operations on state responsibility lands conducted under the terms of a permit issued by the Department of Forestry and Fire Protection pursuant to Article 3 (commencing with Section 4491) of Chapter 7 of Part 2 of Division 4 of the Public

Resources Code when the purpose of the operation is prevention of high-intensity wildland fires through reduction of the volume and continuity of wildland fuels.

(2) Burning of vegetation or disposal of slash following timber operations required under regulations adopted by the State Board of Forestry pursuant to Section 4551.5 or 4562 of the Public Resources Code and for the purpose of reducing the incidence and spread of fires on timberlands.

(3) Wildland vegetation management burns. For purposes of this subdivision, "wildland vegetation management burn" means the use of prescribed burning conducted by a public agency, or through a cooperative agreement or contract involving a public agency to burn land predominantly covered with chaparral, trees, grass, or standing brush. For purposes of this subdivision, "prescribed burning" is the planned application of fire to vegetation to achieve any specific objective on lands selected in advance of that application. The planned application of fire may include natural or accidental ignition.

(b) Prior to adopting or revising fees for the activities described in paragraph (1), (2), or (3), a district shall hold a public hearing and shall consider the following:

(1) The costs of the fees on private landowners and other persons who engage in activities specified in paragraph (1), (2), or (3).

(2) Any revenues currently provided to the county for general government by public agencies which administer public lands.

SEC. 30. Section 42352 of the Health and Safety Code is amended to read:

42352. No variance shall be granted unless the hearing board makes all of the following findings:

(a) That the petitioner for a variance is, or will be, in violation of Section 41701 or of any rule, regulation, or order of the district.

(b) That, due to conditions beyond the reasonable control of the petitioner, requiring compliance would result in either (1) an arbitrary or unreasonable taking of property, or (2) the practical closing and elimination of a lawful business.

(c) That the closing or taking would be without a corresponding benefit in reducing air contaminants.

(d) That the applicant for the variance has given consideration to curtailing operations of the source in lieu of obtaining a variance.

(e) During the period the variance is in effect, that the applicant will reduce excess emissions to the maximum extent feasible.

(f) During the period the variance is in effect, that the applicant will monitor or otherwise quantify emission levels from the source, if requested to do so by the district, and report these emission levels to the district pursuant to a schedule established by the district.

SEC. 31. Section 42402.5 is added to the Health and Safety Code, to read:

42402.5. In addition to any civil and criminal penalties prescribed

under this article, a district may impose administrative ~~complaint~~ ~~penalties~~ for a violation of this part, or any order, permit, rule, or regulation of the state board or of a district, including a district hearing board adopted pursuant to Part 1 (commencing with Section 39000) to Part 4 (commencing with Section 41500), inclusive, if the district board has adopted rules and regulations specifying procedures for the imposition and amounts of these penalties. No administrative civil penalty levied pursuant to this section may exceed five hundred dollars (\$500) for each violation. However, nothing in this section intended to restrict the authority of a district to negotiate mutual settlements under any other penalty provisions of law which exceed five hundred dollars (\$500).

SEC. 32. Section 43000.5 is added to the Health and Safety Code to read:

43000.5. The Legislature further finds and declares:

(a) That despite the significant reductions in vehicle emissions which have been achieved in recent years, continued growth in population and vehicle miles traveled throughout California have the potential not only to prevent attainment of the state standards, but in some cases, to result in worsening of air quality.

(b) That the attainment and maintenance of the state air quality standards will necessitate the achievement of substantial reductions in new vehicle emissions and substantial improvements in the durability of vehicle emissions systems.

(c) That the burden for achieving needed reductions in vehicle emissions should be distributed equitably among various classes of vehicles, including both on- and off-road vehicles, light-duty cars and trucks, and heavy-duty vehicles, to accomplish improvements in both the emissions level and in-use performance and durability of new motor vehicles.

(d) That the state board should take immediate action to implement both short- and long-range programs of across-the-board reductions in vehicle emissions which can be relied upon by the districts in the preparation of their attainment plans or plan revisions pursuant to Sections 40911, 40902, and 40925.

(e) That in order to attain the state and federal standards as expeditiously and equitably as possible, it is necessary for the authority of the state board to be clarified and expanded with respect to the control of motor vehicles and motor vehicle fuels.

SEC. 33. Section 43013 of the Health and Safety Code is amended to read:

43013. (a) The state board may adopt and implement motor vehicle emission standards, in-use performance standards, and motor vehicle fuel specifications for the control of air contaminants and sources of air pollution which the state board has found to be necessary, cost-effective, and technologically feasible to carry out the purposes of this division.

(b) The state board may, consistent with subdivision (a), adopt

standards and regulations for light-duty and heavy-duty motor vehicles; medium-duty motor vehicles, as determined and specified by the state board; motorcycles; off-highway vehicles; construction equipment; farm equipment; utility engines; locomotives; and, to the extent permitted by federal law, marine vessels.

(c) Prior to adopting standards and regulations for farm equipment, the state board shall hold a public hearing and find and determine that the standards and regulations are necessary, cost-effective, and technologically feasible. The state board shall also consider the technological effects of emission control standards on the cost, fuel consumption, and performance characteristics of mobile farm equipment.

(d) Notwithstanding subdivision (b), the state board shall not adopt any standard or regulation affecting locomotives until the final study required under Section 5 of Chapter 1326 of the Statutes of 1987 has been completed and submitted to the Governor and Legislature.

SEC. 34. Section 43018 is added to the Health and Safety Code, to read:

43018. (a) The state board shall endeavor to achieve the maximum degree of emission reduction possible from vehicular and other mobile sources in order to accomplish the attainment of the state standards at the earliest practicable date.

(b) Not later than January 1, 1992, the state board shall take whatever actions are necessary, cost-effective, and technologically feasible in order to achieve, not later than December 31, 2000, a reduction in the actual emissions of reactive organic gases of at least 55 percent, a reduction in emissions of oxides of nitrogen of at least 15 percent from motor vehicles. These reductions in emissions shall be calculated with respect to the 1987 baseline year. The state board also shall take action to achieve the maximum feasible reductions in particulates, carbon monoxide, and toxic air contaminants from vehicular sources.

(c) In carrying out this section, the state board shall adopt standards and regulations which will result in the most cost-effective combination of control measures on all classes of motor vehicles and motor vehicle fuel, including, but not limited to, all of the following:

(1) Reductions in motor vehicle exhaust and evaporative emissions.

(2) Reductions in emissions from in-use emissions from motor vehicles through improvements in emission system durability and performance.

(3) Requiring the purchase of low-emission vehicles by state fleet operators.

(4) Specification of vehicular fuel composition.

(d) In order to accomplish the purposes of this division, and to ensure timely approval of the district's plans for attainment of the state air quality standards by the state board, the state board shall adopt the following schedule for workshops and hearings to consider

the adoption of the standards and regulations required pursuant to this section:

(1) Workshops on the adoption of vehicular fuel specifications for aromatic content, diesel fuel quality, light-duty vehicle exhaust emission standards, and revisions to the standards for new vehicle certification and durability to reflect current driving conditions and useful vehicle life shall be held not later than March 31, 1989. Hearings of the state board to consider adoption of proposed regulations pursuant to this subdivision shall be held not later than November 15, 1989.

(2) Workshops on the adoption of regulations governing gasoline Reid Vapor Pressure, and standards for heavy-duty and medium-duty vehicle emissions, shall be held not later than January 31, 1990. Hearings of the state board to consider adoption of proposed regulations pursuant to this subdivision shall be held not later than November 15, 1990.

(3) Workshops on the adoption of regulations governing detergent content, emissions from off-highway vehicles, vehicle fuel composition, emissions from construction equipment and farm equipment, motorcycles, locomotives, utility engines, and to the extent permitted by federal law, marine vessels, shall be held not later than January 31, 1991. Hearings of the state board to consider adoption of proposed regulations pursuant to this subdivision shall be held not later than November 15, 1991.

SEC. 35. Section 43019 is added to the Health and Safety Code, to read:

43019. The state board may adopt, by regulation, a schedule of annual fees for the certification of motor vehicles and engines sold in the state to cover the costs of state programs authorized or required under this chapter related to mobile sources. The total amount of funds collected pursuant to this section shall not exceed four million five hundred thousand dollars (\$4,500,000) in the 1989-90 fiscal year, and in any subsequent year shall not increase by an amount greater than the annual increase in the California Consumer Price Index, as determined pursuant to Section 2212 of the Revenue and Taxation Code, for the preceding year. The fees collected by the state board pursuant to this section shall be deposited in the Air Pollution Control Fund.

SEC. 36. No reimbursement is required by this act pursuant to Section 6 of Article XIII B of the California Constitution because the local agency or school district has the authority to levy service charges, fees, or assessments sufficient to pay for the program or level of service mandated by this act.

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**APPENDIX C:**  
**TOXIC AIR CONTAMINANT IDENTIFICATION**

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**Appendix C**  
**Toxic Air Contaminant Identification List**  
**March 1991**

**I. Substances identified as Toxic Air Contaminants by the Air Resources Board, pursuant to the provisions of AB 1807.**

Asbestos	Chromium VI
Benzene	Ethylene dibromide
Cadmium (metallic cadmium and cadmium compounds)	Ethylene dichloride
Carbon tetrachloride	Ethylene oxide
Chlorinated dioxins and dibenzofurans (15 species)	Inorganic arsenic
Chloroform	Methylene chloride
	Trichloroethylene
	Vinyl chloride

**II. Substances currently under review or nominated for review for identification as Toxic Air Contaminants.**

**A. Substances already in the review process.**

Acetaldehyde	Formaldehyde
Benzo(a)pyrene	Inorganic lead
1,3-Butadiene	Nickel and nickel compounds
Diesel exhaust	Perchloroethylene
	Styrene

**B. Substances nominated for review.**

Acrylamide	Dimethyl sulfate	4,4'-Methylenedianiline
Acrylonitrile	Environmental tobacco smoke	N-Nitrosomorpholine
Beryllium compounds	Ethyl acrylate	PAHs
Dialkylnitrosamines	Hexachlorobenzene	PCBs
p-Dichlorobenzene	Hydrazine	Propylene oxide
1,1-Dimethylhydrazine	Mercury compounds	Radionuclides
Dk(2-ethylhexyl)phthalate		Toluene diisocyanates
1,4-Dioxane		2,4,6-Trichlorophenol

**III. Substances which are being evaluated for entry into Category II (IIA or IIB). Factors considered in this evaluation include carcinogenic and noncarcinogenic health effects, emissions and exposure in California.**

**A. Substances known to be emitted in California (Includes Hazardous Air Pollutants identified in the Federal Clean Air Act known to be emitted in California).**

Acetone	Benzoyl chloride	Catechol
Acetonitrile	Benzyl chloride	Chlorinated fluorocarbons
Acrolein	Biphenyl	Chlorine
Acrylic acid	Bis(2-ethylhexyl) adipate	Chlorine dioxide
Allyl chloride	Bromine compounds	Chloroacetic acid
Aluminum	(inorganic)	Chlorobenzenes
Ammonia	Butyl acrylate	Chlorophenols
Ammonium nitrate	Butyl benzyl phthalate	Chromium compounds
Ammonium sulfate	Captan	Cobalt compounds
Antimony compounds	Carbon black extracts	Copper compounds
Arsenic compounds	Carbaryl	Creosotes
Barium compounds	Carbon disulfide	Creosols/cresylic acid (isomers and mixtures)
	Carbonyl sulfide	Crystalline silica

### Subcategory IIIA: Continued

Cumene	Hydrochloric acid	Phenol
Cumene hydroperoxide	Hydrogen fluoride	2-Phenylphenol
Cyanide compounds	Hydrogen sulfide	Phosphine
Cyclohexane	Hydroquinone	Phosphoric acid
2,4-D (salts and esters)	Isopropyl alcohol	Phosphorus
Decabromodiphenyl oxide	4,4'-Isopropylidenediphenol	Phthalic anhydride
Diaminotoluene (mixed isomers)	Lead compounds	1,3-Propane sulfone
Dibenzofuran	Malic anhydride	Propionaldehyde
Dibutylphthalate	Manganese compounds	Propoxur
1,3-Dichloropropene	Methanol	Propene
Dichlorvos	Methyl bromide	Propylene dichloride
Dicofol	Methyl chloride	sec-Butyl alcohol
Diethanolamine	Methyl ethyl ketone	Selenium compounds
Dimethyl phthalate	Methyl hydrazine	Silver compounds
4,6-Dinitro-o-cresol (and salts)	Methyl isobutyl ketone	Sodium hydroxide
Epichlorohydrin	Methyl methacrylate	Sulfuric acid
1,2-Epoxybutane	Methyl tert-butyl ether	Titanium tetrachloride
Ethyl benzene	Methylene diphenyl-disocyanate	Terephthalic acid
Ethyl chloride	Molybdenum trioxide	tert-Butyl alcohol
Ethylene glycol	n-Butyl alcohol	Thiourea
Ethylene thiourea	Nitrobenzene	Toluene
Gasoline vapors	2-Nitropropane	1,1,1-Trichloroethane
Glutaraldehyde	Nitric acid	1,2,4-Trimethylbenzene
Glycol ethers	Nitrotriacetic acid	2,2,4-Trimethylpentane
Hexachlorocyclohexanes	Parathion	Vinyl acetate
Hexachloroethane	Peracetic acid	Vinylidene chloride
Hexane		Xylenes (o, m, p)
		Zinc compounds

### B. Substances identified as Hazardous Air Pollutants in the Federal Clean Air Act for which California emissions information is not currently available.

Acetamide	Dichloroethyl ether	Methyl iodide
Acetophenone	Diethyl sulfate	Methyl isocyanate
2-Acetylaminofluorene	3,3'-Dimethoxybenzidine	N,N-Dimethylamine
4-Aminobiphenyl	Dimethylaminobenzene	4-Nitrobiphenyl
Aniline	3,3'-Dimethyl benzidine	4-Nitrophenol
o-Anisidine	Dimethyl carbamoyl chloride	N-Nitroso-N-methyl urea
Benzidine	Dimethyl formamide	Pentachloronitrobenzene
Benzotrichloride	2,4-Dinitrophenol	p-Phenylenediamine
Bis(chloromethyl)ether	2,4-Dinitrotoluene	Phosgene
Bromoform	1,2-Diphenylhydrazine	Polyyclic organic matter
Calcium cyanamide	Ethyl carbamate	beta-Propiolactone
Caprolactam	Ethylene imine	1,2-Propylenimine
Chloramben	Ethyldene dichloride	Quinoline
Chlordane	Fine mineral fibers	Quinone
2-Chloroacetophenone	Heptachlor	Styrene oxide
Chlorobenzilate	Hexachlorobutadiene	1,1,2,2-Tetrachloroethane
Chloromethyl methyl ether	Hexachlorocyclopentadiene	2,4-Toluene diamine
Chloroprene	Hexamethylene-1,6-diisocyanate	o-Tolidine
Coke-oven emissions	Hexamethylphosphoramide	Toxaphene
DDE	Isophorone	1,1,2-Trichloroethane
Diazomethane	Lindane	Triethylamine
1,2-Dibromo-3-chloropropane	Methoxychlor	Trifluralin
3,3'-Dichlorobenzidine	4,4'-Methylene bis(2-chloroaniline)	Vinyl bromide

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**APPENDIX D:**  
**STATIONARY SOURCE EMISSION REDUCTION**

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**APPENDIX D**  
**STATIONARY SOURCE EMISSION REDUCTIONS**

**Stationary Source Emission Reductions**

**Bay Area ROG Emission Inventory Trends: 1987-2000 (CAP Table 2)**

	1994	1997	2000
	ROG	ROG	ROG
<b>Stationary Sources</b>	<b>220</b>	<b>233</b>	<b>241</b>
<b>Mobile Sources</b>	<b>249</b>	<b>219</b>	<b>191</b>
<b>Other</b>	<b>50</b>	<b>51</b>	<b>51</b>
<b>Grand Total</b>	<b>519</b>	<b>501</b>	<b>483</b>

**ROG Reductions**

<b>Surface Coating and Solvent Use</b>	1992	1993	1994	1995	1996	1997	1998	1999	2000
<b>High</b>									
A1 (1)	0	0	0	0	0	0.17	0.17	0.17	0.18
A2									
A3 (2)	0	0	0	0.34	0.35	0.51	0.52	0.53	0.53
A4 (3)	1.9	1.96	4.71	4.91	6.55	6.69	6.83	6.91	7
A5 (4)	0	0	0.43	0.44	0.59	0.6	0.61	0.62	0.63
A6 (5)	0	0	0.37	0.38	0.53	0.54	0.56	0.56	0.57
A7 (6)	0	0	0	0	0.91	0.93	0.94	0.96	0.97
A8 (8)	0	0	0	0	0	0.17	0.17	0.17	0.18
A9 (9)	0	0	0	0	0	0	0	0	0
A10 (10)	0	0	0.77	0.78	0.79	0.8	0.82	0.83	0.84
A11 (13)	0	0	0	2.1	2.14	2.18	2.22	2.25	2.27
A12 (12)	0	0	0	0.41	0.42	0.43	0.43	0.44	0.45
A13 (14)	0	0	0.1	0.26	0.27	0.27	0.28	0.28	0.28
A14 (35)	0	0.23	0.23	0.24	0.24	0.25	0.25	0.69	0.7
A15 (36)									
A16 (15)	0	0	0	0	0	0	0	0.12	0.13
A17 (43)	0	0	0	0	0	0	0.36	0.36	0.37
A18 (16)	0	0	0	0	5.8	11.6	11.7	11.9	12
A19 (68)	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>1.9</b>	<b>2.19</b>	<b>6.61</b>	<b>9.86</b>	<b>18.59</b>	<b>25.14</b>	<b>25.86</b>	<b>26.79</b>	<b>27.1</b>
<b>Low</b>									
A1 (1)	0	0	0	0	0	0.17	0.17	0.17	0.18
A2									
A3 (2)	0	0	0	0.27	0.28	0.36	0.37	0.38	0.38

A4 (3)	1.26	1.3	4.03	4.2	5.82	5.94	6.06	6.13	6.21
A5 (4)	0	0	0.36	0.37	0.45	0.46	0.47	0.47	0.48
A6 (5)	0	0	0.25	0.26	0.4	0.41	0.42	0.42	0.43
A7 (6)	0	0	0	0	0.46	0.46	0.47	0.48	0.48
A8 (8)	0	0	0	0	0	0.14	0.14	0.15	0.15
A9 (9)	0	0	0	0	0	0	0	0	0
A10 (10)	0	0	0.51	0.52	0.53	0.54	0.54	0.55	0.56
A11 (13)	0	0	0	1.84	1.88	1.91	1.94	1.96	1.99
A12 (12)	0	0	0	0.2	0.21	0.21	0.22	0.22	0.22
A13 (14)	0	0	0.08	0.18	0.19	0.19	0.19	0.2	0.2
A14 (35)	0	0.15	0.16	0.16	0.16	0.17	0.17	0.51	0.52
A15 (36)									
A16 (15)	0	0	0	0	0	0	0	0.11	0.11
A17 (43)	0	0	0	0	0	0	0.36	0.36	0.37
A18 (16)	0	0	0	0	3.86	7.72	7.83	7.91	8
A19 (68)	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>1.26</b>	<b>1.45</b>	<b>5.39</b>	<b>8</b>	<b>14.24</b>	<b>18.68</b>	<b>19.35</b>	<b>20.02</b>	<b>20.28</b>
 <b>Average</b>									
A1 (1)	0	0	0	0	0	0.17	0.17	0.17	0.18
A2	0	0	0	0	0	0	0	0	0
A3 (2)	0	0	0	0.305	0.315	0.435	0.445	0.455	0.455
A4 (3)	1.58	1.63	4.37	4.555	6.185	6.315	6.445	6.52	6.605
A5 (4)	0	0	0.395	0.405	0.52	0.53	0.54	0.545	0.555
A6 (5)	0	0	0.31	0.32	0.465	0.475	0.49	0.49	0.5
A7 (6)	0	0	0	0	0.685	0.695	0.705	0.72	0.725
A8 (8)	0	0	0	0	0	0.155	0.155	0.16	0.165
A9 (9)	0	0	0	0	0	0	0	0	0
A10 (10)	0	0	0.64	0.65	0.66	0.67	0.68	0.69	0.7
A11 (13)	0	0	0	1.97	2.01	2.045	2.08	2.105	2.13
A12 (12)	0	0	0	0.305	0.315	0.32	0.325	0.33	0.335
A13 (14)	0	0	0.09	0.22	0.23	0.23	0.235	0.24	0.24
A14 (35)	0	0.19	0.195	0.2	0.2	0.21	0.21	0.6	0.61
A15 (36)	0	0	0	0	0	0	0	0	0
A16 (15)	0	0	0	0	0	0	0	0.115	0.12
A17 (43)	0	0	0	0	0	0	0.36	0.36	0.37
A18 (16)	0	0	0	0	4.83	9.66	9.765	9.905	10
A19 (68)	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>1.58</b>	<b>1.82</b>	<b>6</b>	<b>8.93</b>	<b>16.415</b>	<b>21.91</b>	<b>22.605</b>	<b>23.405</b>	<b>23.69</b>
 <b>Emissions Subject to Control</b>									
A1 (1)	0	0	0	0	0	3.52	3.55	3.56	3.6
A2									
A3 (2)	0	0	0	1.36	1.42	1.45	1.48	1.50	1.52
A4 (3)	6.7	6.89	7.08	7.38	7.68	7.84	8	8.1	8.2
A5 (4)	0	0	1.44	1.46	1.49	1.51	1.53	1.55	1.57
A6 (5)	0	0	1.23	1.28	1.33	1.36	1.39	1.41	1.44
A7 (6)	0	0	0	0	9.13	9.29	9.44	9.57	9.69

A8 (8)	0	0	0	0	0	0.28	0.29	0.29	0.29
A9 (9)	0	0	0	0	7.32	7.45	7.58	7.67	7.76
A10 (10)	0	0	2.56	2.6	2.64	2.68	2.72	2.75	2.79
A11 (13)	0	0	0	2.62	2.68	2.73	2.77	2.81	2.84
A12 (12)	0	0	0	10.1	10.5	10.7	10.8	11	11.1
A13 (14)	0	0	0.76	0.78	0.8	0.82	0.83	0.84	0.85
A14 (35)	0	0.75	0.77	0.8	0.82	0.83	0.85	0.86	0.87
A15 (36)	0	0	0	0	0	0.29	0.3	0.3	0.3
A16 (15)	0	0	0	0	0	0	0	0.14	0.14
A17 (43)	0	0	0	0	0	0	0.4	0.4	0.41
A18 (16)	0	0	0	0	19	19.3	19.6	19.8	20
A19 (68)	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>6.7</b>	<b>7.64</b>	<b>13.84</b>	<b>28.38</b>	<b>64.81</b>	<b>70.05</b>	<b>71.53</b>	<b>72.55</b>	<b>73.37</b>
<b>A1-A19 % of Emissions Subject to Control</b>			<b>43.35%</b>			<b>31.28%</b>			<b>32.29%</b>
<b>A1-A19 % of Background Stationary</b>			<b>2.22%</b>			<b>7.71%</b>			<b>8.11%</b>
<b>A1-A19 % of Total Background</b>			<b>1.16%</b>			<b>4.37%</b>			<b>4.90%</b>
<b>Fuels/Organic Liquids Storage and Distribution</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>
<b>High</b>									
B1 (19)	0	0	0	0	0.08	0.08	0.09	0.09	0.09
B2 (20)	0	0	0	0	0	1.55	1.56	1.58	1.59
B3 (21)	0	0.24	0.25	0.26	0.26	0.27	0.27	0.27	0.27
B4 (23)	0	0	0	0	0.17	0.17	0.17	0.17	0.17
B5 (60)	0	0	0.43	0.43	0.44	0.44	0.44	0.45	0.45
B6 (48)	0	0	0	0.07	0.07	0.07	0.07	0.07	0.08
B7 (22)	0	0	0	0	0	0	0.1	0.1	0.1
<b>Total</b>	<b>0</b>	<b>0.24</b>	<b>0.68</b>	<b>0.76</b>	<b>1.02</b>	<b>2.58</b>	<b>2.7</b>	<b>2.73</b>	<b>2.75</b>
<b>Low</b>									
B1 (19)	0	0	0	0	0.07	0.08	0.08	0.08	0.08
B2 (20)	0	0	0	0	0	1.28	1.29	1.3	1.32
B3 (21)	0	0.16	0.17	0.17	0.17	0.17	0.17	0.18	0.18
B4 (23)	0	0	0	0	0.13	0.13	0.13	0.13	0.13
B5 (60)	0	0	0.4	0.41	0.41	0.42	0.42	0.43	0.43
B6 (48)	0	0	0	0.07	0.07	0.07	0.07	0.07	0.08
B7 (22)	0	0	0	0	0	0	0.09	0.09	0.09
<b>Total</b>	<b>0</b>	<b>0.16</b>	<b>0.57</b>	<b>0.65</b>	<b>0.85</b>	<b>2.15</b>	<b>2.25</b>	<b>2.28</b>	<b>2.31</b>
<b>Average</b>									
B1 (19)	0.00	0.00	0.00	0.00	0.08	0.08	0.09	0.09	0.09
B2 (20)	0.00	0.00	0.00	0.00	0.00	1.42	1.43	1.44	1.46
B3 (21)	0.00	0.20	0.21	0.22	0.22	0.22	0.22	0.23	0.23
B4 (23)	0.00	0.00	0.00	0.00	0.15	0.15	0.15	0.15	0.15
B5 (60)	0.00	0.00	0.42	0.42	0.43	0.43	0.43	0.44	0.44
B6 (48)	0.00	0.00	0.00	0.07	0.07	0.07	0.07	0.07	0.08
B7 (22)	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.10	0.10
<b>Total</b>	<b>0.00</b>	<b>0.20</b>	<b>0.63</b>	<b>0.71</b>	<b>0.94</b>	<b>2.37</b>	<b>2.48</b>	<b>2.51</b>	<b>2.53</b>

Emissions Subject to Control	B1 (19)	0	0	0	0	0.09	0.09	0.09	0.1	0.1
	B2 (20)	0	0	0	0	0	2.69	2.72	2.75	2.77
	B3 (21)	0	0.4	0.41	0.42	0.43	0.43	0.44	0.45	0.45
	B4 (23)	0	0	0.42	0.42	0.42	0.42	0.42	0.42	0.43
	B5 (60)	0	0	0.45	0.45	0.46	0.46	0.47	0.47	0.48
	B6 (48)	0	0	0	0.08	0.08	0.08	0.08	0.08	0.08
	B7 (22)	0	0	0	0	0	0	0.11	0.11	0.12
<b>Total</b>		<b>0</b>	<b>0.4</b>	<b>1.28</b>	<b>1.37</b>	<b>1.48</b>	<b>4.17</b>	<b>4.33</b>	<b>4.38</b>	<b>4.43</b>
<b>% Emission Subject to Control</b>	---	<b>0.5</b>	<b>48.83%</b>	<b>51.46%</b>	<b>63.18%</b>	<b>56.71%</b>	<b>57.16%</b>	<b>57.19%</b>	<b>57.11%</b>	
<b>% of Stationary Source</b>			<b>0.23%</b>			<b>0.83%</b>			<b>0.87%</b>	
<b>% of Total Emissions</b>				<b>0.12%</b>			<b>0.47%</b>			<b>0.52%</b>
 <b>Refinery and Chemical Processes</b>										
		1992	1993	1994	1995	1996	1997	1998	1999	2000
<b>High</b>	C1 (24)	0	0	0.65	0.66	0.67	0.67	0.68	0.68	0.69
	C2 (25)	0	0	0	1.13	1.14	1.15	1.16	1.18	1.19
	C3 (26)	0	0	0	3.34	3.37	3.41	3.44	3.47	3.5
	C4 (28)	0	0	0	0	0	0	0.12	0.12	0.12
	C5 (37)	0	0	0	0	0	0	2.62	2.65	2.67
	C6 (27)	0	0	0	0	1.85	1.87	1.89	1.9	1.92
	C7 (59)	0	0	0	0	0	0	0.32	0.32	0.32
<b>Total</b>		<b>0</b>	<b>0</b>	<b>0.65</b>	<b>5.13</b>	<b>7.03</b>	<b>7.1</b>	<b>10.23</b>	<b>10.32</b>	<b>10.41</b>
<b>Low</b>	C1 (24)	0	0	0.49	0.49	0.5	0.5	0.51	0.51	0.52
	C2 (25)	0	0	0	1.01	1.02	1.04	1.04	1.05	1.06
	C3 (26)	0	0	0	2.46	2.49	2.51	2.53	2.56	2.58
	C4 (28)	0	0	0	0	0	0	0.1	0.1	0.1
	C5 (37)	0	0	0	0	0	0	2.49	2.51	2.53
	C6 (27)	0	0	0	0	1.76	1.77	1.79	1.8	1.82
	C7 (59)	0	0	0	0	0	0	0.32	0.32	0.32
<b>Total</b>		<b>0</b>	<b>0</b>	<b>0.49</b>	<b>3.96</b>	<b>5.77</b>	<b>5.82</b>	<b>8.78</b>	<b>8.85</b>	<b>8.93</b>
<b>Average</b>	C1 (24)	0.00	0.00	0.57	0.58	0.59	0.59	0.60	0.60	0.61
	C2 (25)	0.00	0.00	0.00	1.07	1.08	1.10	1.10	1.12	1.13
	C3 (26)	0.00	0.00	0.00	2.90	2.93	2.96	2.99	3.02	3.04
	C4 (28)	0.00	0.00	0.00	0.00	0.00	0.00	0.11	0.11	0.11
	C5 (37)	0.00	0.00	0.00	0.00	0.00	0.00	2.56	2.58	2.60
	C6 (27)	0.00	0.00	0.00	0.00	1.81	1.82	1.84	1.85	1.87
	C7 (59)	0.00	0.00	0.00	0.00	0.00	0.00	0.32	0.32	0.32
<b>Total</b>		<b>0.00</b>	<b>0.00</b>	<b>0.57</b>	<b>4.55</b>	<b>6.40</b>	<b>6.46</b>	<b>9.51</b>	<b>9.59</b>	<b>9.67</b>
<b>Emissions Subject to Control</b>	C1 (24)	0	0	0.81	0.82	0.83	0.84	0.84	0.85	0.86
	C2 (25)	0	0	0	1.26	1.27	1.28	1.29	1.31	1.32
	C3 (26)	0	0	0	3.51	3.55	3.58	3.62	3.65	3.69

	C4 (28)	0	0	0	0	0	0	0.18	0.18	0.18
	C5 (37)	0	0	0	0	0	0	2.76	2.79	2.81
	C6 (27)	0	0	0	0	1.95	1.97	1.98	2	2.02
	C7 (59)	0	0	0	0	0	0	0.35	0.35	0.35
Total		0	0	0.81	5.59	7.6	7.67	11.02	11.13	11.23
% Emissions Subject to Control	---	---	70.37%	81.31%	84.21%	84.22%	86.25%	86.12%	86.11%	
% of Stationary Source Emissions			0.21%			2.27%			3.31%	
% of Total Emissions			0.11%			1.29%			2.00%	
<b>Other Industrial/Commercial Processes</b>										
High		E1 (39)								
	Total	E3 (64)	0	0	1.26	1.29	1.33	1.37	1.41	1.45
			0	0	1.26	1.29	1.33	1.37	1.41	1.5
Low		E1 (39)								
	Total	E3 (64)	0	0	1.26	1.29	1.33	1.37	1.41	1.45
			0	0	1.26	1.29	1.33	1.37	1.41	1.5
Average		E1 (39)	0	0	0	0	0	0	0	0
	Total	E3 (64)	0	0	1.26	1.29	1.33	1.37	1.41	1.45
			0	0	1.26	1.29	1.33	1.37	1.41	1.5
Emissions Subject to Control		E1 (39)	0	0	0	0	0	2.52	2.55	2.58
	Total	E3 (64)	0	0	1.57	1.62	1.66	1.71	1.77	1.82
			0	0	1.57	1.62	1.66	1.71	4.29	4.37
										4.45
% of Emissions Subject to Control	---	---	80.25%	79.63%	80.12%	80.12%	32.87%	33.18%	33.71%	
% of Stationary Sources			0.47%			0.48%			0.51%	
% of Total Emissions			0.24%			0.27%			0.31%	
<b>Intermittent Measures</b>										
High		G1 (41)	14.3	14.1	14.3	14.4	14.6	14.7	14.8	15
	Total	G2 (46)	0	4.14	4.06	4.1	4.14	4.17	4.2	4.23
			14.3	18.24	18.36	18.5	18.74	18.87	19	19.23
Low		G1 (41)	7.13	7.06	7.13	7.2	7.28	7.34	7.41	7.48
	Total	G2 (46)	0	3.68	3.61	3.64	3.68	3.7	3.73	3.76
			7.13	10.74	10.74	10.84	10.96	11.04	11.14	11.24
Average		G1 (41)	10.715	10.58	10.715	10.8	10.94	11.02	11.105	11.24
	Total	G2 (46)	0	3.91	3.835	3.87	3.91	3.935	3.965	3.995
			10.715	14.49	14.55	14.67	14.85	14.955	15.07	15.235
										15.35

Emissions Subject to Control	G1 (41)	98.2	97.8	98.8	99.7	101	103	104	105	105
	G2 (46)	0	4.6	4.51	4.55	4.63	4.66	4.67	4.67	4.74
		98.2	102.4	103.31	104.25	105.63	107.66	108.67	109.67	109.74
% of Emissions Subject to Control		10.91%	14.15%	14.08%	14.07%	14.06%	13.89%	13.87%	13.89%	13.99%
% of Total Emissions				2.80%			2.99%			3.18%

## Bay Area NOx Emission Inventory Trends: 1987-2000 (CAP Table 2)

		1994		1997		2000
Stationary Sources		NOx		NOx		NOx
Mobile Sources		165		179		187
Other		378		359		345
Grand Total		0		0		0
		543		538		532

## NOx Reductions

## Refinery and Chemical Processes

		1992	1993	1994	1995	1996	1997	1998	1999	2000
High	C7 (59)	0	0	0	0	0	0	0.21	0.21	0.21
Low	C7 (59)	0	0	0	0	0	0	0.21	0.21	0.21
Average	C7 (59)	0	0	0	0	0	0	0.21	0.21	0.21
Emissions Subject to Control		0	0	0	0	0	0	0.23	0.23	0.23

## % Emissions Subject to Control

## % of Stationary Source Emissions

## % of Total Emissions

## Combustion of Fuels (NOx)

High	D1 (29)	0	0	0	0	8.56	8.69	8.82	8.94	9.07
	D2 (30)	0	0	0	0	0	7.22	7.35	7.45	7.51
	D3 (31)	0	0	0	0	0	16.3	16.6	17	17.4
	D4 (32)	0	0	0	0	0	36.4	36.7	37	37.4
	D5 (33)	0	0	0	0	0	3.52	3.6	3.69	3.77
	D6 (34)	0	0	0	0	0	3.41	3.48	3.55	3.63
	D7 (69)									
	D8 (70)									
Total		0	0	0	0	8.56	75.54	76.55	77.63	78.78
Low	D1 (29)	0	0	0	0	6.76	6.87	6.97	7.07	7.17
	D2 (30)	0	0	0	0	0	6.73	6.85	6.93	7.02
	D3 (31)	0	0	0	0	0	14.5	14.8	15.1	15.4

	D4 (32)	0	0	0	0	27.3	27.5	27.8	28
	D5 (33)	0	0	0	0	2.94	3	3.07	3.14
	D6 (34)	0	0	0	0	2.79	2.85	2.91	2.97
	D7 (69)								
	D8 (70)								
<b>Total</b>		0	0	0	0	6.76	61.13	61.97	62.88
<b>Average</b>	D1 (29)	0.00	0.00	0.00	0.00	7.66	7.78	7.90	8.01
	D2 (30)	0.00	0.00	0.00	0.00	0.00	6.98	7.10	7.19
	D3 (31)	0.00	0.00	0.00	0.00	0.00	15.40	15.70	16.05
	D4 (32)	0.00	0.00	0.00	0.00	0.00	31.85	32.10	32.40
	D5 (33)	0.00	0.00	0.00	0.00	0.00	3.23	3.30	3.38
	D6 (34)	0.00	0.00	0.00	0.00	0.00	3.10	3.17	3.23
	D7 (69)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	D8 (70)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>		0.00	0.00	0.00	0.00	7.66	68.34	69.26	70.26
<b>Emissions Subject to Control</b>	D1 (29)	0	0	0	0	9.66	9.81	9.96	10.1
	D2 (30)	0	0	0	0	0	11.2	11.4	11.6
	D3 (31)	0	0	0	0	0	18.1	18.5	18.9
	D4 (32)	0	0	0	0	0	45.5	45.9	46.3
	D5 (33)	0	0	0	0	0	5.87	6	6.14
	D6 (34)	0	0	0	0	0	6.19	6.33	6.46
	D7 (69)								
	D8 (70)								
<b>Total</b>		0	0	0	0	9.66	96.67	98.09	99.5
<b>% Emissions Subject to Control</b>	---	---	---	---	79.30%	70.69%	70.61%	70.61%	70.62%
<b>% of Stationary Source Emissions</b>					0.00%	38.18%			38.10%
<b>% of Total Emissions</b>					0.00%	12.70%			13.39%

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**APPENDIX E:**  
**FUNDAMENTAL CONCEPTS OF**  
**ENVIRONMENTAL NOISE**

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## APPENDIX E

### FUNDAMENTAL CONCEPTS OF ENVIRONMENTAL ACOUSTICS

Noise is defined as unwanted sound. Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Sound levels are usually measured and expressed in decibels (dB) with 0 dB corresponding roughly to the threshold of hearing. Decibels and other technical terms are defined in Table E-1.

Most of the sounds that we hear in the environment do not consist of a single frequency, but rather a broad band of frequencies, with each frequency differing in sound level. The intensities of each frequency add together to generate a sound. The method commonly used to quantify environmental sounds consists of evaluating all of the frequencies of a sound in accordance with a weighting that reflects the facts that human hearing is less sensitive at low frequencies and extreme high frequencies than in the frequency mid-range. This is called "A" weighting, and the decibel level so measured is called the A-weighted sound level (dBA). In practice, the level of a sound source is conveniently measured using a sound level meter that includes an electrical filter corresponding to the A-weighting curve. Typical A-levels measured in the environment and in industry are shown in Figure E-1 for different types of noise.

Although the A-weighted noise level may adequately indicate the level of environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a conglomeration of noise from distant sources that create a relatively steady background noise in which no particular source is identifiable. To describe the time-varying character of environmental noise, the statistical noise descriptors  $L_{10}$ ,  $L_{50}$ , and  $L_{90}$  are commonly used. They are the A-weighted noise levels equaled or exceeded during 10 percent, 50 percent, and 90 percent of a stated time period. A single number descriptor called the  $L_{eq}$  is now also widely used. The  $L_{eq}$  is the average A-weighted noise level during a stated period of time.

In determining the daily level of environmental noise, it is important to account for the difference in response of people to daytime and nighttime noises. During the nighttime, exterior background

TABLE E-1

<u>TERM</u>	<u>DEFINITION</u>
Decibel, dB	A unit describing the amplitude of sound, equal to 20 times the logarithm to the base 10 of the ratio of the pressure of the sound measured to the reference pressure, which is 20 micropascals (20 micronewtons per square meter).
Frequency, Hz	The number of complete pressure fluctuations per second above and below atmospheric pressure.
A-Weighted Sound Level, dB	The sound pressure level in decibels as measured on a sound level meter using the A-weighting filter network. The A-weighting filter deemphasizes the very low and very high-frequency components of the sound in a manner similar to the frequency response of the human ear and correlates well with subjective reactions to noise. All sound levels in this report are A-weighted.
$L_{10}$ , $L_{50}$ , $L_{90}$	The A-weighted noise levels that are exceeded 10 percent, 50 percent, and 90 percent of the time during the measurement period.
Equivalent Noise Level, $L_{eq}$	The average A-weighted noise level during the measurement period.
Community Noise Equivalent Level, CNEL	The average A-weighted noise level during a 24-hour day, obtained after an addition of 5 decibels to evening levels from 7 p.m. to 10 p.m. and after addition of 10 decibels to sound levels in the night between 10 p.m. and 7 a.m.
Day-Night Noise Level, $L_{dn}$	The average A-weighted noise level during a 24-hour day, obtained after addition of 10 decibels to levels measured in the night between 10 pm and 7 am.
Ambient Noise Level	The composite of noise from all sources near and far. The normal or existing level of environmental noise at a given location.
Intrusive	That noise which intrudes over and above the existing ambient noise at a given location. The relative intrusiveness of a sound depends upon its amplitude, duration, frequency, and time of occurrence and tonal or informational content as well as the prevailing ambient noise level.

**FIGURE E-1**  
**TYPICAL SOUND LEVELS MEASURED IN THE ENVIRONMENT AND INDUSTRY**

<u>At a Given Distance From Noise Source</u>	<u>A-Weighted Sound Level In Decibels</u>	<u>Noise Environments</u>	<u>Subjective Impression</u>
	140		
Civil Defense Siren (100')	130		
Jet Takeoff (200')	120		Pain Threshold
	110	Rock Music Concert	
Pile Driver (50') Ambulance Siren (100')	100		Very Loud
Freight Cars (50') Pneumatic Drill (50') Freeway (100')	90	Boiler Room Printing Press Plant	
	80	In Kitchen With Garbage Disposal Running	
	70		Moderately Loud
Vacuum Cleaner (10')	60	Data Processing Center Department Store	
Light Traffic (100') Large Transformer (200')	50	Private Business Office	
	40		Quiet
Soft Whisper (5')	30	Quiet Bedroom	
	20	Recording Studio	
	10		Threshold of Hearing
	0		

noises are generally lower than the daytime levels. However, most household noise also decreases at night, and exterior noise becomes very noticeable. Further, most people sleep at night and are very sensitive to noise intrusion. To account for human sensitivity to nighttime noise levels, a descriptor,  $L_{dn}$  (day-night average sound level), was developed. The  $L_{dn}$  divides the 24-hour day into a daytime period of 7 a.m. to 10 p.m. and a nighttime period of 10 p.m. to 7 a.m. The nighttime noise level is weighted 10 dB higher than the daytime noise level. The Community Noise Equivalent Level (CNEL) is another 24-hour average which includes both an evening and nighttime weighting.

The effects of noise on people can be listed in three general categories:

- o subjective effects of annoyance, nuisance, dissatisfaction;
- o interference with activities such as speech, sleep, learning; and
- o physiological effects such as startling, hearing loss.

In almost every case, the levels associated with environmental noise produce effects only in the first two categories. Workers in industrial plants can experience noise in the last category. Unfortunately, there is as yet no completely satisfactory way to measure the subjective effects of noise, or of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance, and habituation to noise over differing individual past experiences with noise.

Thus, an important way of determining a person's subjective reaction to a new noise is with a comparison of the existing environment to which one has adapted: the so-called "ambient." In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by the hearers.

With regard to increases in A-weighted noise level, knowledge of the following relationships will be helpful in understanding this report.

- o Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived.

- o Outside of the laboratory, a 3-dB change is considered a just-perceivable difference.
- o A change in level of at least 5 dB is required before any noticeable change in community response would be expected.
- o A 10-dB change is subjectively heard as approximately a doubling in loudness, and would almost certainly cause an adverse change in community response.

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